SEPTEMBER 23, 1944

Railway Age

Founded in 1856

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2 STANDOUTS for today's traffic

New Century Switch Stand

The New Century Switch Stand has had a long career. First manufactured more than 50 years ago, it has met the needs of American railroads with very few changes in basic design—evidence of its soundness and durability. Some New Centuries still in use were first placed in service 25, 30, or 35 years ago.

The counterweighted throwing lever of the New Century operates parallel to the rail. This switch stand is featured by ease of installation and maintenance, and all parts are interchangeable with the corresponding parts of older models.

The New Century is recommended for use with heavy rail at all points on main lines and branch lines, and in yards.

Bethlehem Hook Flange Guard Rail

Here's a guard rail that's virtually foolproof. The hook flange fits under the running rail in such a way that the weight of the train keeps the guard rail from overturning, regardless of side thrust. Moreover, the device is so constructed that a cushioning action results as the wheels are aligned passing the frog point, thus minimizing the danger of chipped or cracked wheels. Many installations have given 15 to 20 years of continuous service life.

The Hook Flange Guard Rail is bolted to special tie plates equipped with heavy shoulders—a positive aid to alignment.

Install this guard rail at points of heaviest service. It's built to take a beating.

Other Bethlehem Products for the Railroads

ALLOY STEELS
MAYARI R
(high-strength, low-alloy steel)
TOOL STEELS
FROGS—CROSSINGS
RAIL ANCHORS—RAIL BRACES
RAILS
TIE PLATES
BOLTS AND NUTS
SPIKES
WHEELS AND AXLES
FREIGHT CARS
LOCOMOTIVE FORGINGS
BOILER AND FIREBOX PLATES
TUBULAR PRODUCTS
BRIDGES
TRANSMISSION TOWERS

★ ★ ★ BETHLEHEM STEEL ★ ★ ★

FOR MANY PARTS *It Pays To Specify Steel That Can Be Flame-Hardened*

• Railroads frequently specify that parts subject to excessive wear be made of irons and steels that can be flame-hardened, so that this treatment can be applied to them when new. This oxy-acetylene method for giving parts increased life can be used to treat most medium-carbon steels and high-strength irons, raising the surface hardness without affecting the tough inner core or the chemical composition of the metal. Above, a lead truck rocker is being flame-hardened.

New parts that are *not* made of a hardenable steel often can be protected at the points where wear occurs by applying a layer of the proper Oxweld welding rod and then flame-hardening the deposit. Worn parts can be rebuilt and protected against future wear by the same method.

Oxweld has helped to develop efficient flame-hardening and other oxy-acetylene techniques. An Oxweld representative will be glad to give you further information about this method.

THE OXWELD RAILROAD SERVICE COMPANY
Unit of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York

SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

The word "Oxweld" is a registered trade-mark of a Unit of Union Carbide and Carbon Corporation.

MISTER...tie that whistle down!

Locomotive enginemen throughout the country, blowing the whistles for V-Day, can be proud of their part in keeping locomotives "at full throttle" through wartime traffic.

Dearborn, too, is proud to have had a part in the servicing of over 200 railroads whose locomotives met wartime demands.

Dearborn service and water treatment made many a locomotive available for 'round-the-clock service and doubling back without shopping for costly boiler repairs caused by scale, corrosion, and foaming.

In your vicinity there is a Dearborn engineer who will be glad to discuss water treatment plans for your road . . . for Dearborn-serviced railroads mean efficient operation in peacetime as well as in war.

DEARBORN CHEMICAL COMPANY

310 S. Michigan Ave., Chicago 4
205 E. 42nd St., New York
807-15 Mateo St., Los Angeles
2454 Dundas St., West, Toronto

Dearborn
TRADE MARK REGISTERED

BOILER WATER TREATMENT AND SERVICE

"---AND KEEP YOUR POWDER *ROLLING!*"

In an eastern harbor bob the ships of a convoy sailing in three days. Bombs to flatten enemy strongholds are rolling to shipside from a close-in arsenal—but the vital fuses for them are in a plant deep in the Midwest. To the railroads comes a call—"Get the fuses here to meet the convoy deadline." Special handling orders go out; railroaders all along the way are alerted; the fuses arrive in time!

It's happening every week.

Yes, the story of how American industry and American railroaders rose to meet the desperate need for explosives for the Army and Navy, and for the Allies, is one of the epics of the war.

This production last year was more than 3,000,000,000 pounds; in the last three years twice that—TNT, smokeless powder, nitroglycerine, a long list of others that cannot be named.

But ammunition piled high in an ordnance depot vanquishes no foe. It must be moved—and right there is one of the toughest, most ticklish of all the staggering war assignments that were handed to U.S. railroads.

They've met this assignment like champions. They've delivered, on time, the most critical of all critical supplies for warmaking—and without a single major disaster. Bombs to smash the Japs, shells for the Long Toms in Italy and France and for the big seacoast and naval guns—more than 90 per cent of them moved by rail in this country.

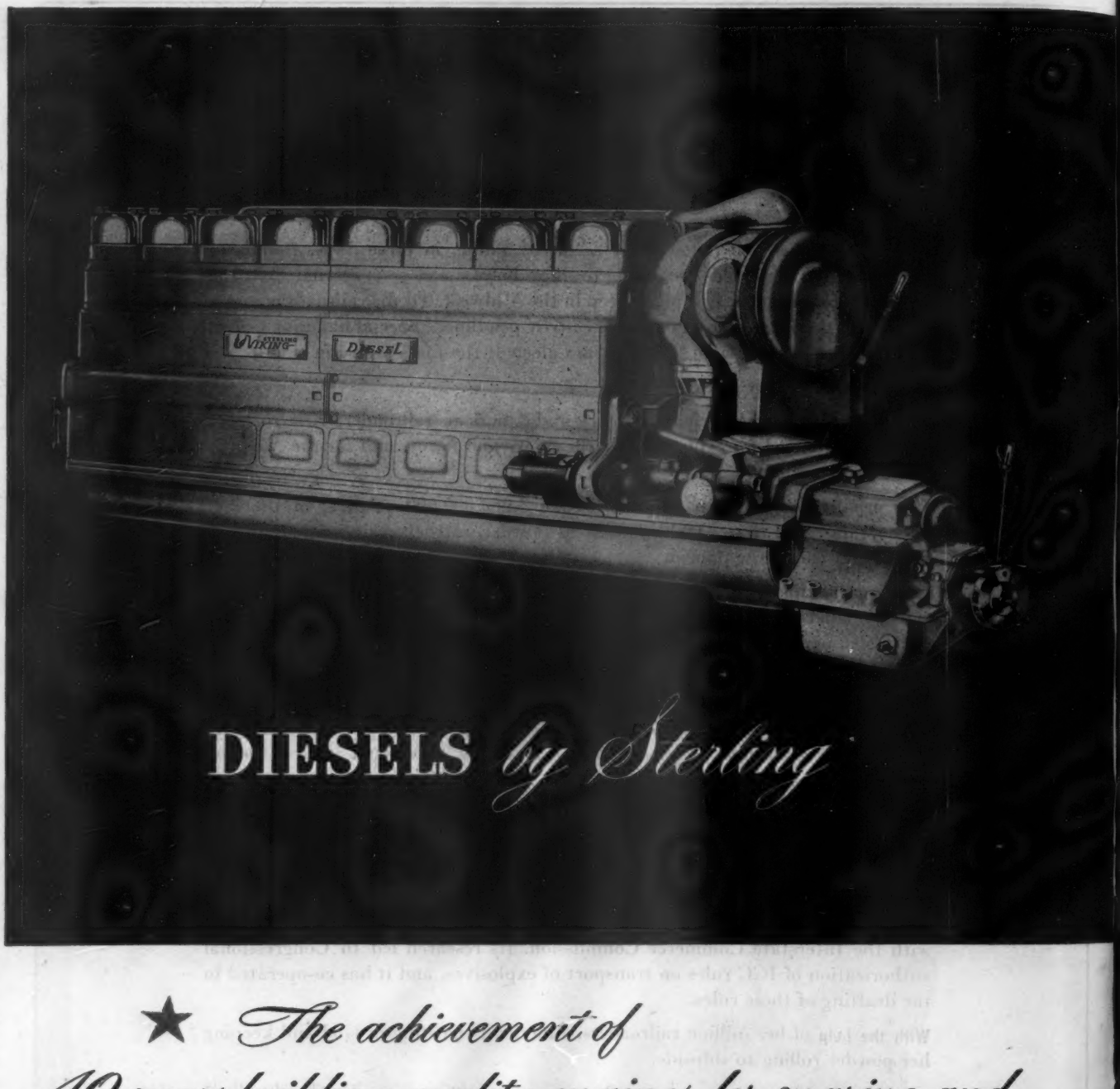
The U.S. railroads didn't just happen to do this job magnificently. Behind this performance were years of research into manufacturing and handling methods and a continuing campaign aimed at safety.

Over a long period the Association of American Railroad's Bureau for the Safe Transportation of Explosives and Other Dangerous Articles studied the problem with the Interstate Commerce Commission. Its research led to Congressional authorization of ICC rules on transport of explosives, and it has co-operated in the drafting of these rules.

With the help of her million railroaders, America is trusting in God and keeping her powder rolling to shipside.

—*The Trackwalker*

★ ★ ★



DIESELS *by Sterling*

★ *The achievement of 40 years building quality engines for marine and industrial use*

● For many years before Pearl Harbor Sterling engineers were experimenting on a new type diesel engine—a medium duty power plant combining the compactness of a gasoline engine with the efficiency of diesel operation and the economy of diesel fuel.

Now ready for delivery is their achievement—the new Sterling Viking diesel. Here is a compact medium duty power plant rugged enough to give heavy duty performance—yet it operates on two-thirds or less the amount of fuel consumed by a gasoline model of similar rating.

If you are replacing your present power plant or laying plans now for present or future needs, Sterling engineers will be glad to cooperate in furnishing full information for installing the new Viking diesel. Write us for details.

STERLING ENGINE COMPANY
1277 Niagara Street, Buffalo 13, N. Y.
OFFICES IN NEW YORK, WASHINGTON AND CHICAGO

Sterling engines... diesel, gasoline or gas—in marine and stationary models... are now available in horsepowers from 85 to 1200.

SPECIFICATIONS . . . STERLING VIKING DIESEL

Supercharged and Unsupercharged—6 and 8 cylinder

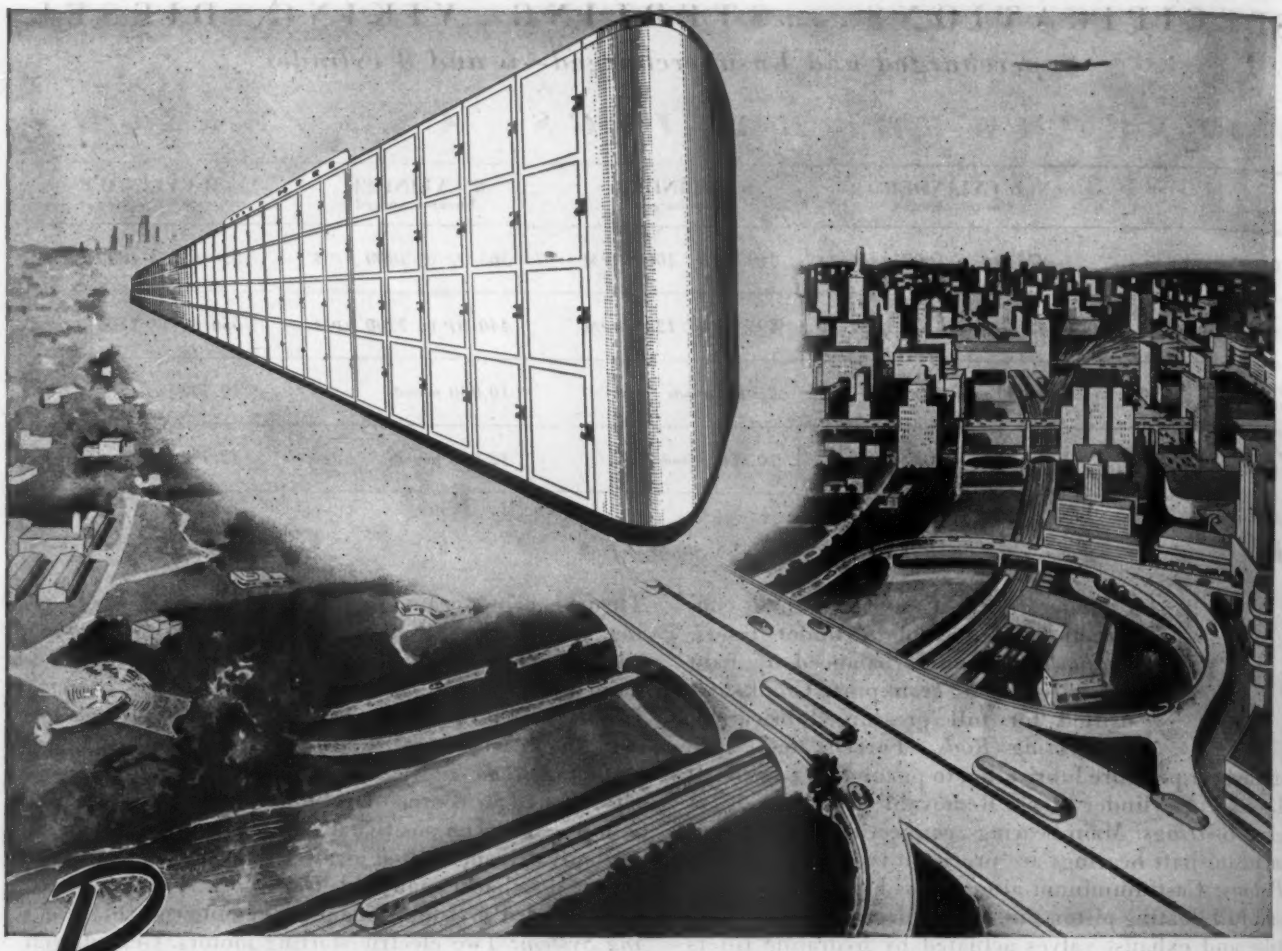
HORSEPOWER RATINGS AND WEIGHT

	6 CYLINDER *Unsupercharged*	6 CYLINDER *Supercharged*	8 CYLINDER *Unsupercharged*	8 CYLINDER *Supercharged*
CONTINUOUS	275 HP @ 1000 RPM	410 HP @ 1000 RPM	365 HP @ 1000 RPM	550 HP @ 1000 RPM
INTERMITTENT	325 HP @ 1200 RPM	495 HP @ 1200 RPM	440 HP @ 1200 RPM	650 HP @ 1200 RPM
WEIGHT WITH REVERSE GEAR	8,000 pounds	8,500 pounds	10,000 pounds	10,500 pounds
WEIGHT WITH REVERSE AND REDUCTION GEAR	10,000 pounds	10,500 pounds	12,000 pounds	12,500 pounds

ENGINE CONSTRUCTION

Cylinder Block: Cast iron enbloc construction. Removable cylinder liners. *Crankshaft:* Counterbalanced 6″ main journals and 5″ crankpins. Crankshaft drilled for full pressure lubrication. *Connecting Rods:* Forged steel, rifle drilled for pressure lubrication to piston pin. *Camshaft:* Located in cylinder block. Removable from side of engine. *Bearings:* Main bearings, connecting rod bearings and camshaft bearings are precision type steel backed. *Pistons:* Cast aluminum alloy, provided with six rings and full floating piston pin. *Valve Mechanism:* Dual intake and exhaust valves actuated by hydraulic lifters through push rods and rocker arms. *Timing Gears:* Helical gears located at forward end of engine. *Reverse Gear:* Bevel planetary type, manual or remote control. Thrust bearing located in after end of reverse gear housing. *Lubrication:* Pressure lubrication to all moving parts. Dry sump. Separate gear driven positive displacement pressure and scavenge pumps. *Cooling System:* Fresh water cooling. Separate gear driven self-priming centrifugal fresh water and sea water pumps. *Fuel Injection System:* Individual cam operated pumps. Nozzles located in center of cylinder heads. Fuel transfer pump gear driven positive displacement. *Supercharger:* Exhaust driven, located at after end of engine. Water-jacketed exhaust manifold. *Governor:* Hydraulic variable speed. Provision is made for remote control. *Starting System:* Two electric starting motors. Gear driven generator for battery charging. *Tachometer and Revolution Counter:* Gear driven electric tachometer and mechanical revolution counter.

"KEEP BUYING WAR BONDS"



POST WAR PEOPLE WILL ALL BE TRAVEL-WISE (LOCKER-WISE)

YOU KNOW—and we know—how the enormous volume of passenger traffic during the past few years has stepped up the demand for the newer things in transportation service. Whether or not the volume of travel falls off after the war this new generation of travelers will expect and demand an extension of the convenience, comfort, safety, speed and service which they have discovered can be theirs when they travel by rail, bus or air.

American Parcel Lockers and American Locker Service have been put to the test during these war years. That over 60% of today's parcel checking in rail and bus stations and terminals is in self-service lockers is evidence that the public knows a good thing when it sees it,—and uses it. Our consultants will gladly confer with you without obligation regarding the inclusion of parcel lockers in your plans for renovation or new building.

AMERICAN LOCKER COMPANY, Inc.

Executive Offices

211 CONGRESS ST., BOSTON 10, MASS.

DISTRICT OFFICES

BOSTON NEW YORK PHILADELPHIA PITTSBURGH ATLANTA CLEVELAND CHICAGO DALLAS LOS ANGELES

★ ★ ★ ★ ★

CONVENIENCE - SAFETY - NO WAITING IN LINE - THE KEY IS YOUR CHECK

FOR QUICK INFORMATION

on Buckets for Railroad Use...Bulletin 1989

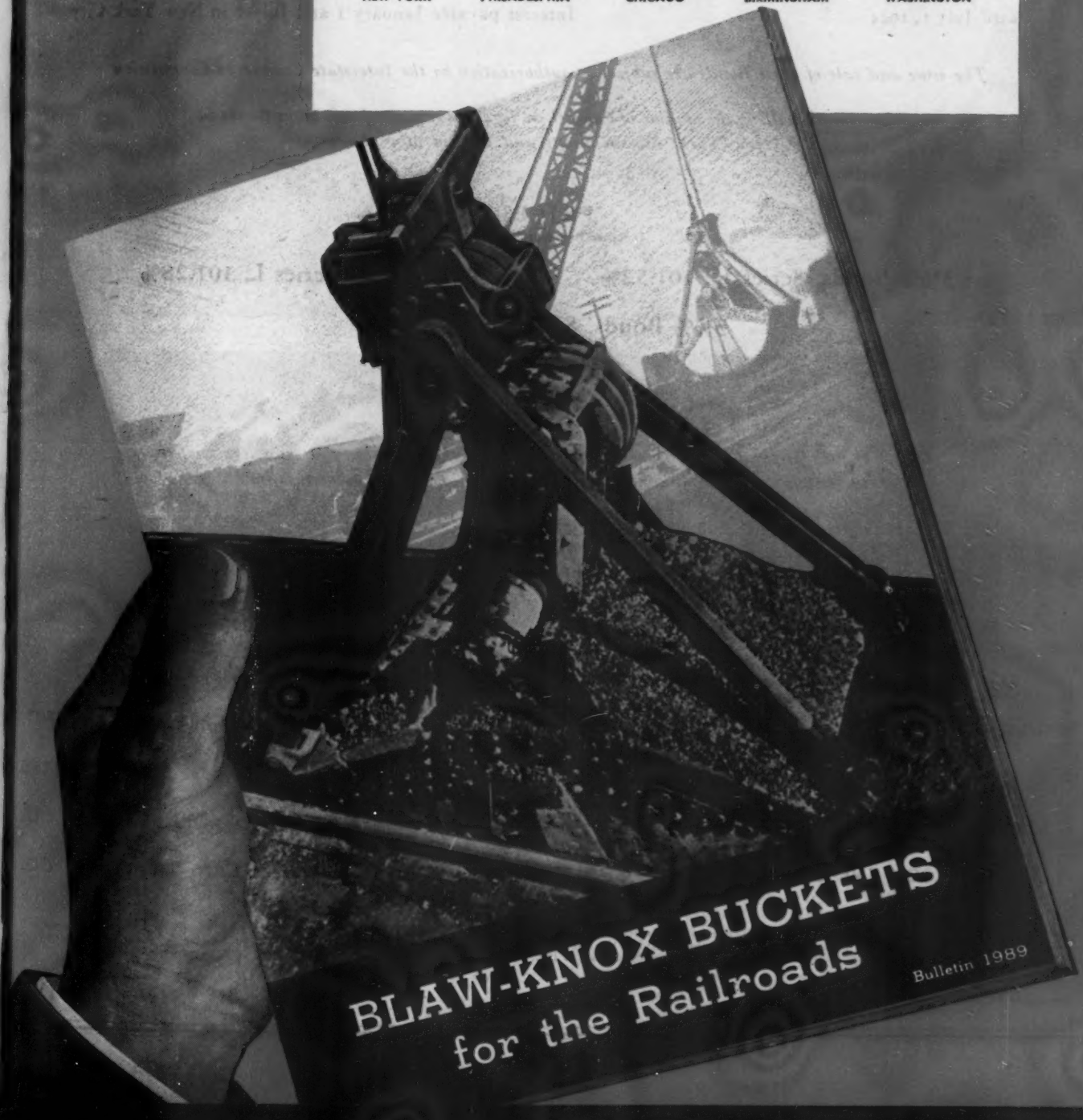
Blaw-Knox manufactures clamshell buckets for all types of railroad applications. Bulletin 1989 classifies and illustrates the types and sizes most widely used and should be a welcome addition to the files of all railroad men interested in the use of clamshells. It gives necessary information quickly and concisely . . . *Write today for your copy.*

BLAW-KNOX DIVISION

OF BLAW-KNOX COMPANY

2061 Farmers Bank Building, Pittsburgh, Pa.

NEW YORK PHILADELPHIA CHICAGO BIRMINGHAM WASHINGTON



This is not a Circular. The offer of these Bonds is made only by means of the Circular, which should be read prior to any purchase of these Bonds.

$100,000,000

Great Northern Railway Company

$35,000,000 General Mortgage 3⅛% Bonds, Series K Due January 1, 1960
30,000,000 General Mortgage 3⅜% Bonds, Series L Due January 1, 1970
35,000,000 General Mortgage 3½% Bonds, Series M Due January 1, 1980

Dated July 1, 1944 — Interest payable January 1 and July 1 in New York City

The issue and sale of these Bonds are subject to authorization by the Interstate Commerce Commission

These Bonds will, in the opinion of Counsel, be legal investments for Savings Banks in New York, Massachusetts and certain other States

PRICES
(Accrued interest to be added)

3⅛% Bonds, Series K, 101.52% **3⅜% Bonds, Series L, 101.28%**

3½% Bonds, Series M, 102.04%

Copies of such Circular are obtainable from only such of the undersigned as may legally offer these securities in compliance with the securities laws of the respective States.

HALSEY, STUART & CO. INC.

LAZARD FRERES & CO. **LADENBURG, THALMANN & CO.**

OTIS & CO. (INCORPORATED) **BEAR, STEARNS & CO.** **WERTHEIM & CO.** **BLAIR & CO., INC.**

HALLGARTEN & CO. **E. H. ROLLINS & SONS** INCORPORATED **SCHOELLKOPF, HUTTON & POMEROY, INC.**

A. C. ALLYN AND COMPANY INCORPORATED **W. C. LANGLEY & CO.** **PAINE, WEBBER, JACKSON & CURTIS**

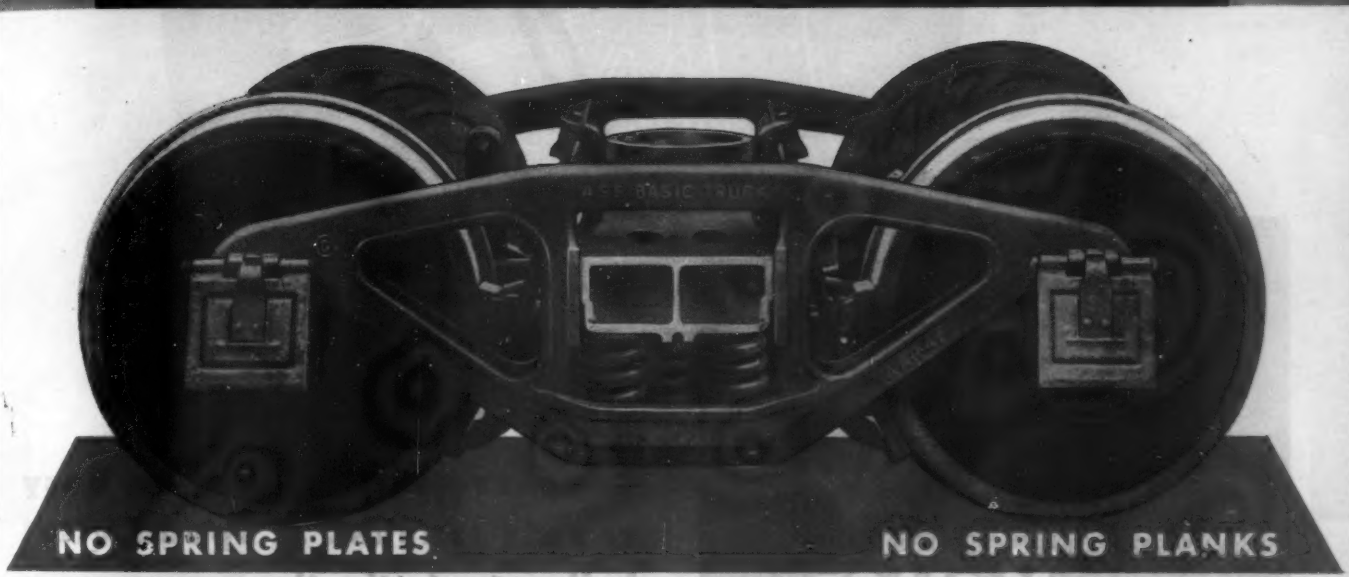
E. M. NEWTON & COMPANY **BURR & COMPANY, INC.** **IRA HAUPT & CO.** **HAYDEN, STONE & CO.**

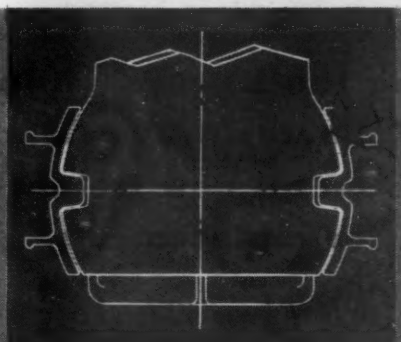
H. M. BYLLESBY AND COMPANY INCORPORATED **GRAHAM, PARSONS & CO.** **KEAN, TAYLOR & CO.**

These Bonds are offered subject to prior sale, when, as and if issued by the Company and accepted by the Purchasers, subject to authorization by the Interstate Commerce Commission of their issuance and sale, and also subject to the approval of counsel for the Purchasers. It is expected that Bonds of all Series in temporary form will be ready for delivery at the office of Halsey, Stuart & Co. Inc., 35 Wall Street, New York 5, N. Y. on or about September 29, 1944.

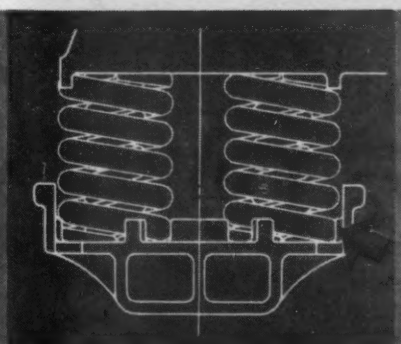
September 14, 1944.

THE A.S.F.
BASIC
FREIGHT-CAR TRUCK





Here is a rugged truck of simple design that combines all the essentials of a smooth, stable freight-car ride with the low-maintenance and safety benefits of simple construction. The A. S. F. Basic Freight-Car Truck is held together by rugged tongues on the side frame columns that mesh with grooves in the bolster. Curved surfaces between side frame columns and bolster minimize column wear, eliminate binding, and provide generous contact areas that assure dependable operation.

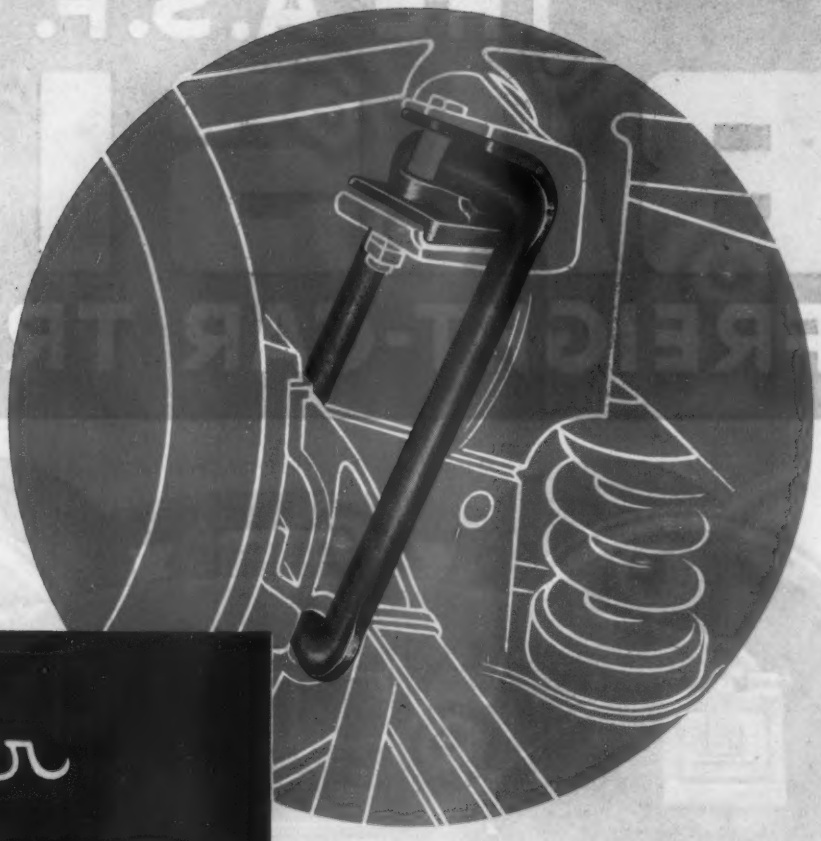


Simple construction is evident in the flanged spring seat that is an integral part of the side frame. Every side frame and bolster meets all A. A. R. strength requirements, of course. And for greater utility, for the interchangeability that means so much especially on interchange service, the Basic Truck can be used with either all-coil spring groups or combination snubber-coil spring groups. The Basic Truck is a safe, easy-riding freight-car truck.

AMERICAN STEEL FOUNDRIES

CHICAGO

MINT-MARK OF FINE CAST STEEL



Lighter Stronger Better

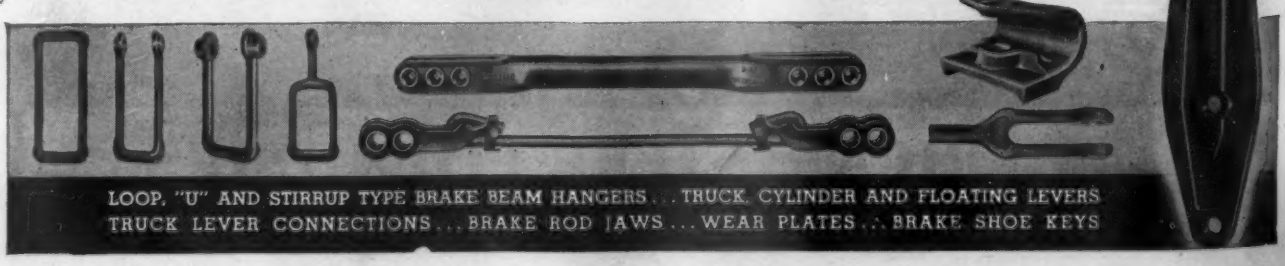
STANDARD ON MOST ROADS

Conserve man-hours on busy repair tracks . . . speed vital lading to destination . . . run more miles between car shoppings . . . by using the lighter, stronger, better Schaefer Brake Gear Appliances on all new freight cars . . . and for replacements.

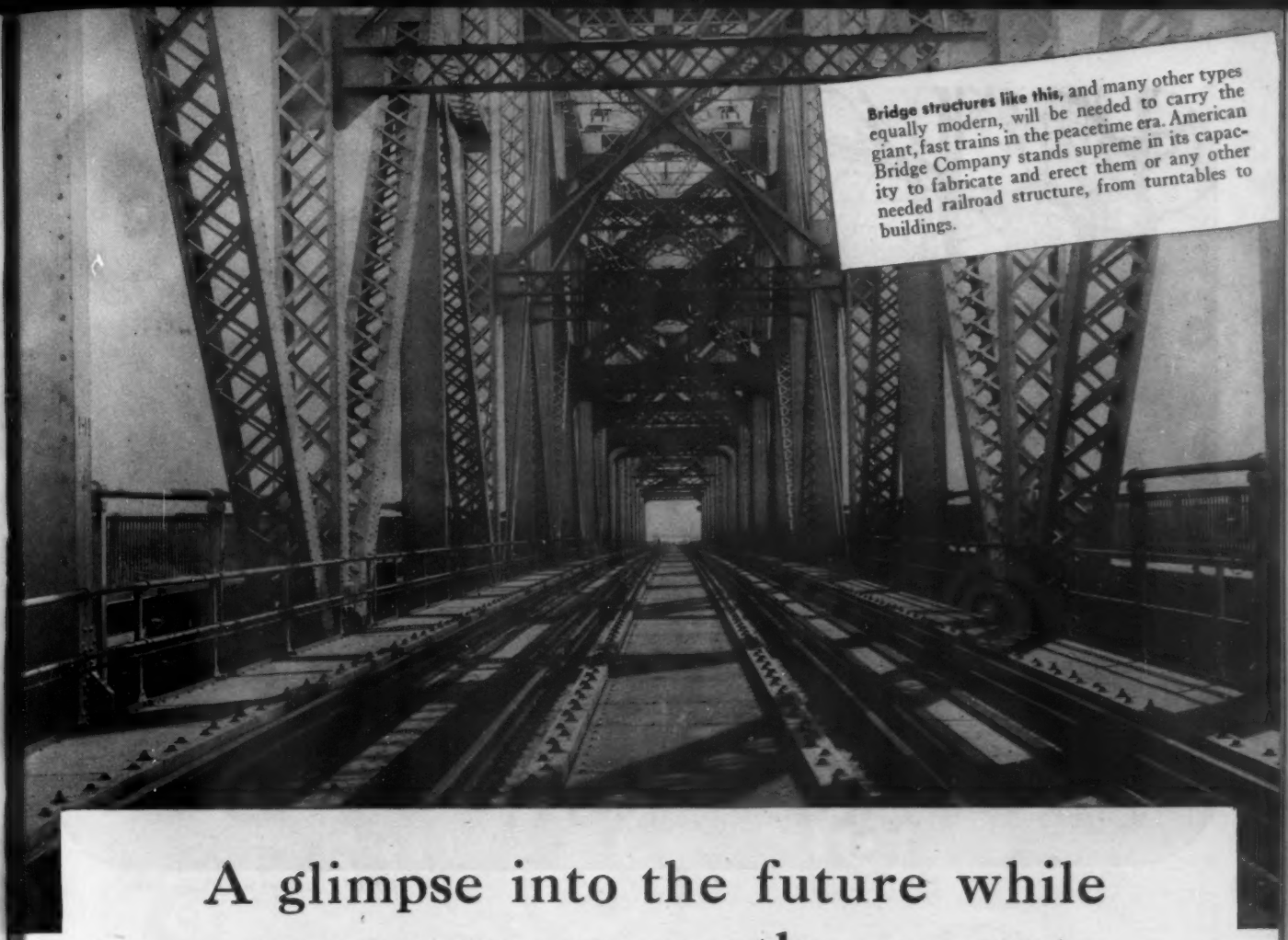
Schaefer Light Weight Design Insures More Than Car Life

Schaefer EQUIPMENT COMPANY

KOPPERS BUILDING · PITTSBURGH, PA.



LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS . . . TRUCK CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS . . . BRAKE ROD JAWS . . . WEAR PLATES . . . BRAKE SHOE KEYS



Bridge structures like this, and many other types equally modern, will be needed to carry the giant, fast trains in the peacetime era. American Bridge Company stands supreme in its capacity to fabricate and erect them or any other needed railroad structure, from turntables to buildings.

A glimpse into the future while your eyes are on the present

NEVER in their history have America's railroads faced a test to match that of this war emergency. Never have they more completely demonstrated their ability to accomplish the seemingly impossible.

The entire operation has been precedent-breaking. Troops, civilians, raw materials and finished products have been moved in numbers and volume with incredible speed and dispatch.

The job is by no means through. It must continue as long as war lasts despite increasing wear and tear on equipment and serious shortages in man power. The utmost is still asked and the carriers have proved that they can and will give it.

Every railroad man knows what high speeds, great loads and ceaselessly pounding traffic does to equipment, roadbeds and structures. That these have stood up and will continue to do so is a monument to foresight, unceasing vigilance and well engineered upkeep and repairs.

But no railroad man, either, doubts for a moment that the future calls for great planning. One glimpse is all that is needed to see that a vast rehabilitation program is inevitable. America, alert to wartime achievements, will demand in peacetime competition a continuance of exceptional service with even greater assurance of speed, comfort and safety. This means changes and improvements in everything from roadbeds to equipment. It means old structures modernized and strengthened, new and better ones built. It means profiting by technological advances in materials and equipment.

When that welcome time arrives, and it may not be long in coming, we, too, will be able to put aside our war job and take on the tasks of peace. Then you will find American Bridge Company better able than ever to help you; ready with unsurpassed facilities, with greater-than-ever resources and experience, to tackle your every structural problem.

AMERICAN BRIDGE COMPANY

General Offices: Frick Building, Pittsburgh, Pa.

District Offices in: Baltimore · Boston · Chicago · Cincinnati · Cleveland · Denver · Detroit
Duluth · Minneapolis · New York · Philadelphia · St. Louis

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*

United States Steel Export Company, New York

UNITED STATES STEEL

Official U. S. Army Signal Corps Photo

THERE'S A *New* HEAVY WEAPON ON THE CUTTING LINES, TOO - IT'S *Super DBL* HIGH SPEED STEEL

Available

IN THESE FORMS

★ Hot Rolled and Forged Bars in all necessary sizes.

★ Ground Bars: rounds in sizes up to 3" dia.—polished, standard ground or rough ground finishes.

★ Hardened and Tempered Tool-Holder Bits in sizes from 3/16" to 1", packed in one or assorted sizes as needed. Also special sizes as may be required.

NOTHING NEW TO LEARN IN HEAT TREATMENT OR SHOP HANDLING

IN the M-12 Tank Destroyer, above, Army Ordnance has combined the great hitting power and range of the 155 mm gun with the speed and mobility of the medium tank chassis. The result is a weapon that not only can stop any enemy tank now or likely to be in the field, but can blast out land strong-points or sink a ship.

In similar fashion, Allegheny Ludlum technicians have added cobalt to the familiar AL-developed DBL low-tungsten moly analysis. The result, *Super DBL*, is a high speed steel of maximum red hardness for heavy duty work—a material that delivers top performance at the same time that it conserves strategic materials.

Super DBL has been thoroughly proved in service. Use it for your heavy roughing and "hogging" jobs—it's suitable for anything from hard, gritty materials to tough, heat-treated alloy steels. ● Full information is available in the *"Super DBL* Blue Sheet." Write for your copy, or for the assistance of our Mill Service Staff in selecting the proper grades of AL Tool Steels for your various production jobs.

ADDRESS DEPT. R.A.-24

Allegheny Ludlum
STEEL CORPORATION
BRACKENRIDGE, PENNSYLVANIA

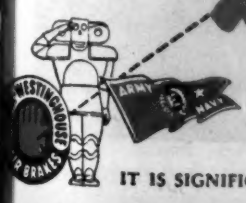
A-9075...W&D

VITAMINS MUST BE BROUGHT TO MARKET

The nation's food basket rolls on rubber. From coast to coast huge fleets of motor carriers are rushing produce to distant markets ★ So vital is this service that split-second schedules are imperative. Obviously, this calls for the finest in equipment which operators everywhere recognize includes the safety standard of the world . . . genuine Bendix-Westinghouse Air Brakes ★

Bendix-Westinghouse and its nation-wide chain of Authorized Distributors are, to a man, interested in explaining what the world's finest Brake and Pneumatic Controls can do to step up your service. Their counsel is entirely free and without obligation.

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY . . . ELYRIA, OHIO



Bendix-Westinghouse

AIR BRAKES

AND PNEUMATIC CONTROL DEVICES

IT IS SIGNIFICANT THAT AMERICA'S FINEST MOTOR TRUCK FLEETS ARE EQUIPPED WITH BENDIX-WESTINGHOUSE AIR BRAKES

FREIGHT OR *Passenger*

They must be kept in service

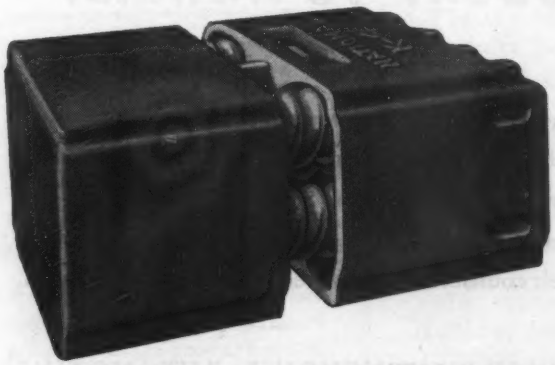
Never before has railroad equipment been called upon to stand the punishment inflicted by the demands of the present war emergency.

Longer, heavier trains, greater speed and continuous service made imperative by the limited number of cars available, put an excessive strain on cars and equipment.

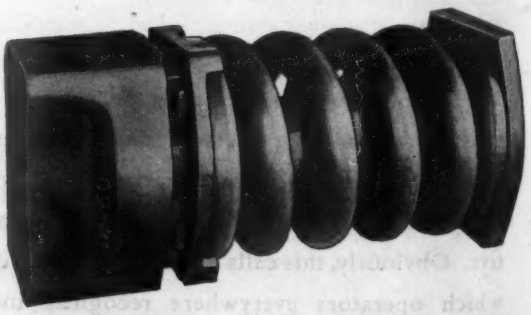
National Draft Gears lighten the burden, by absorbing the blows incident to train make-up and operation.

There is a "National" gear to suit every requirement.

NATIONAL M-17-A DRAFT GEAR
22 3/8" long
A.A.R. Approved



NATIONAL K-4 DRAFT GEAR
Designed especially to meet the requirements of high speed passenger service.



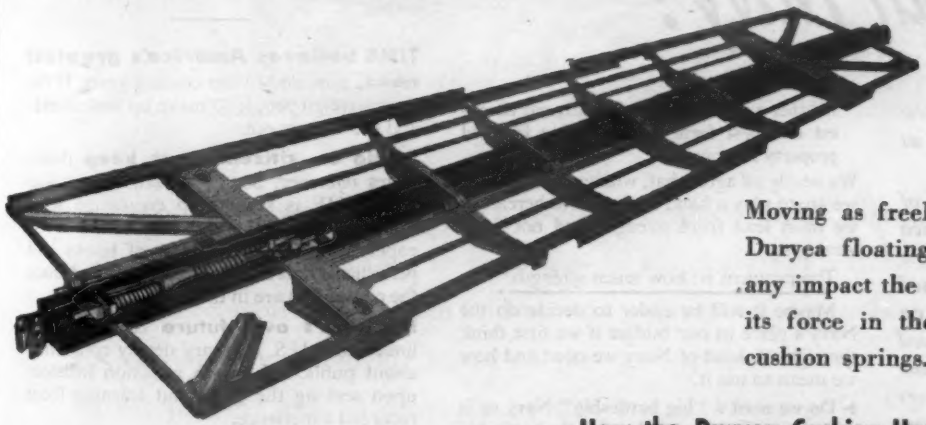
NATIONAL M-50-B DRAFT GEAR
20 1/8" long
A.A.R. Approved

NATIONAL MALLEABLE AND STEEL CASTINGS CO.
General Offices: CLEVELAND, OHIO
Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco.
Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

Why doesn't it break any bones?

Pads and cushions are not enough when you're hit *that* hard. But training teaches a player how to take a terrific impact without injury, how to move *with* a blow so that its force is spent harmlessly.

MOVEMENT CUSHIONS THE SHOCK! The same principle, in the Duryea Cushion Underframe, gives you SHOCKPROOF SHIPPING



Moving as freely as a good halfback's hips, the Duryea floating center sills travel the shock of any impact the entire length of the car, absorbing its force in the unique Duryea arrangement of cushion springs.

How the Duryea Cushion Underframe Contributes to Victory

PROTECTS car and lading, prolongs car life, cuts damage claims.

PERMITS higher handling speeds.

ELIMINATES gear replacements maintaining efficiency for life of car.

SAVES TIME loading and unloading. Needs less packing and bracing.

SAVES MONEY usually spent for maintenance on every part of car.

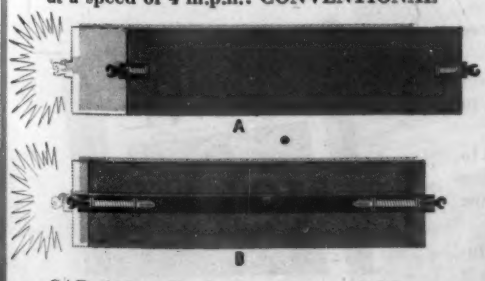
COMPLEMENTS air brake; Duryea cars withstand abrupt stops.

CUTS SLACK to pre-determined ideal.

COSTS NO MORE than conventional type, for average Duryea gear.

Here's what actually happens

. . . when two stationary freight cars receive the same impact, equivalent to a 50-ton car, loaded to capacity, coupling at a speed of 4 m.p.h.: CONVENTIONAL



CAR (A): Draft gear "goes solid," car receives almost entire impact.
DURYEA CAR (B): Shock absorbed by cushion gears, car and lading are comparatively undisturbed.

O. C. DURYEA CORPORATION
30 Rockefeller Plaza, New York 20, N.Y. - Field Building, Chicago 3, Ill.
725 Fifteenth Street, N. W., Washington 5, D. C.

DURYEA *Cushion* UNDERFRAME

FOR FREIGHT CARS

The Modern Safeguard For Shockproof Shippin

What do you want to do with your Navy?

There she rides, the greatest Navy the world has ever seen, twice as powerful as any other fleet afloat . . .

. . . the largest massed aggregation of strength in all the long history of sea power, direct descendant of the supreme navies of the past: of the sword-nosed Greek ships that terrified the watchers on the towers of Troy . . . of the iron-rammed triremes of Tyre and Carthage and Rome . . . of the shield-girt boats of the Vikings . . . of the Venetian galleys full of chain-mailed Crusaders . . . of the British Navy with which Nelson crushed Napoleon's naval ambitions at Trafalgar.

OUR NAVY'S battles in this war have already become classics: the Battle of Midway may well be studied as long as men fight on and under and over the sea. And no one will really know until this war is over how much the Navy contributed to the successful breaching of "Fortress Europe"—or how brilliantly it is outfighting the Japanese octopus in the Pacific.

But when peace comes, when the guns are still . . . *what will become of our Navy then?* Will we maintain it in its present overwhelming power? Or will we decide to spend our money in other ways?

A modern Navy is perhaps the costliest possession known to man.

And yet its cost is only a fraction of the cost of war. So the question we must decide is whether a supreme Navy is really our cheapest and best form of nationwide life and property insurance.

We nearly all agree that, whatever the cost, if we are to play a hand in the world hereafter, we must lead from strength and not from weakness.

The problem is: how much strength?

Maybe it will be easier to decide on the Navy's place in our budget if we first think through the kind of Navy we need and how we mean to use it.

- **Do we need a "big battleship" Navy or is the carrier taking its place? Is the battleship really too expensive a way to carry gunpower?**
- **Is airpower developing so fast that the role of the Navy will become secondary? Should the Navy continue to have its separate air force?**
- **Will there be a revolutionary change in the next few years in motive power or gunpower? What do rockets, jet propulsion, perhaps even atomic power, have in store for future sea power?**
- **What territory are we trying to protect with the Navy? Or are we undertaking to help keep the peace the world around?**
- **What bases must we own or have access to for these purposes? Will we share them with the British . . . the Russians . . . all the United Nations?**
- **What will our possible opponents in any future war be doing with their Navies? Is it enough to keep ahead of the next largest or must we outbuild all of them put together?**
- **Shall we make it possible—and is it desirable—for a million and a half men to stay in the Navy? (That would be cutting present personnel in half.) Should older men retire faster and make more room at the top?**

Should we maintain the Marine Corps in proportion? The Coast Guard? And the Merchant fleet (which has already reached the record-breaking total of 3400 ships)?

In this country no President or Administration—however able—can carry out a strong, consistent naval policy without popular backing and popular understanding.

Are you contributing to that understanding—by developing an opinion of your own—by discussing these problems with other people? For instance:

Did you read Navy Secretary Forrestal's interesting article in the Saturday Evening Post for June 24, **"Will We Choose Naval Suicide Again?"**

Did you note the picture sequence in LIFE for May 8 headed **"Biggest Navy Has Revolutionized the World's Naval Strategy"?**

Did you ponder a bit over Admiral Ernest J. King's review of the Navy's part in the war so far, as summarized in TIME for May 1?

Do you own that old classic on sea fighting, **"The Influence of Sea Power on History,"** by Admiral A. T. Mahan (Little, Brown & Co., $4.50)?

An evening spent on this subject won't make you a naval expert. But it will help you *understand* what the naval experts are talking about, help make you a more intelligent citizen . . . something this nation needs now as never before.

TIME believes America's greatest need, now and in the coming years, is for the sovereign people to make up their minds and speak them out.

To do so, citizens must keep themselves *informed.* So, in advertisements like this, TIME is seeking to encourage wide thinking and reading not only of the newspapers and TIME, but also of books and periodicals that argue the cases and advance the causes that are in the news.

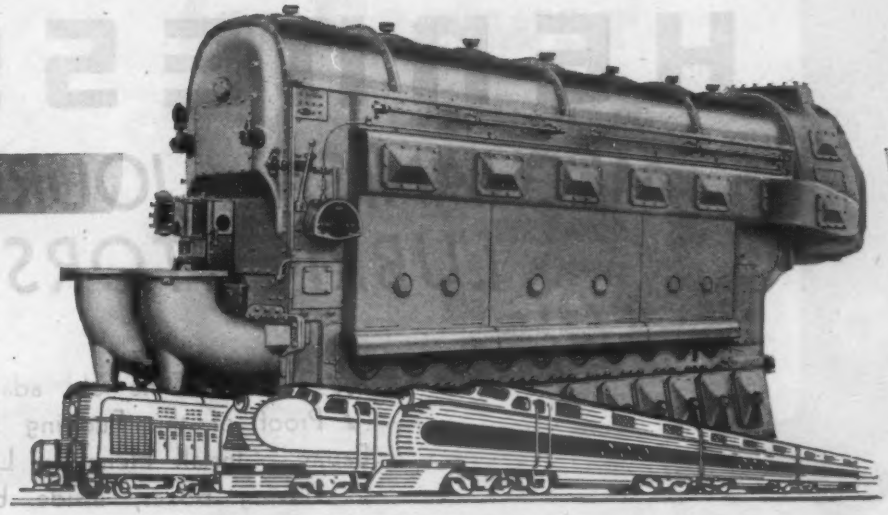
For TIME's own future is unalterably linked to a U.S. citizenry deeply concerned about public affairs—to a nation insistent upon seeking the truth and learning from recorded experience.

This is the sixth advertisement in a series TIME is publishing to get more Americans thinking about the problems we must face after the war is won. This attempt to focus the full voltage of America's mindpower on the problem of what to do with our Navy after victory is appearing in more than 50 newspapers and magazines all across the country.

The weekly NEWSMAGAZINE

9 ROCKEFELLER PLAZA, NEW YORK 20

2,000,000 Horsepower *Field-Tested!*



Two million horsepower of the Opposed-Piston Diesel engines used in Fairbanks-Morse Locomotives have been field-tested . . . rigorously, thoroughly tested on the great proving ground provided by the U. S. Navy at war.

Fairbanks-Morse now brings to Diesel locomotives an engine that has reached a high state of perfection . . . such perfection as can come only from long-continued co-operation between manufacturer and extensive user.

Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

BUY MORE WAR BONDS

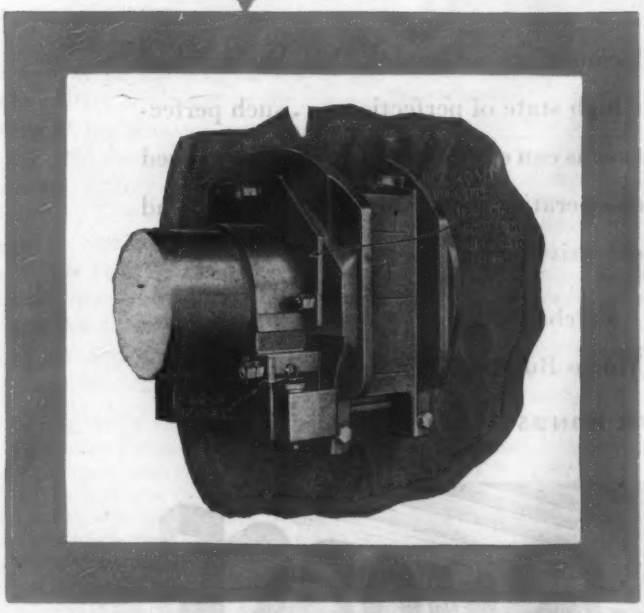
A name worth remembering!

FAIRBANKS-MORSE

Keep Your Costs Down!

with HENNESSY

MECHANICAL JOURNAL LUBRICATORS



VIEW SHOWING END PLATE AND METHOD OF SECURING LUBRICATOR IN DRIVING BOX

YOU know the old adage, "The Proof of the Pudding Is In the Eating." Install Hennessy Lubricators in driving boxes, inside bearing or A.A.R. Type Journal Boxes and watch your lubricating costs drop.

Hennessy Mechanical Journal Lubricators require no expensive machining or other labor costs. They increase overall availability of locomotives and life of all wearing parts, extend operating periods between shoppings resulting in decreased consumption of lubricant, bearings, rod bushings and round house labor.

Thorough oil bath lubrication assures a positive film of oil of the proper nature between bearing and journal which results in low operating temperatures at all times.

HENNESSY LUBRICATOR CO., INC.
75 WEST STREET NEW YORK 6, N. Y.

Better Eyes for Postwar Streamliners

Edwards is ready to supply new and better "eyes" for postwar streamliners, developed from years of experience in building transportation sash.

The new Edwards Double Glazed Dehydrated Sash Units *completely eliminate* fog, film and frost, triple causes of passenger annoyance and inconvenience. This is accomplished by perfect mechanical sealing of the dead air between the inner and outer panes. The Edwards *"telltale" dehydrator cartridge* is an additional safeguard, indicating, by color change, when it is necessary to make a simple, easy replacement of the cartridge to insure proper dehydration. And, because Edwards units afford better insulation of window areas, thermal losses are reduced and air conditioning aided in attaining peak efficiency.

Engineered for long, maintenance-free service under all operating conditions, new Edwards Sash Units are *better appearing, lighter, stronger* and more *rigid* because of improved design and the use of modern materials. Supplied in *completely assembled* units they are quickly and easily installed in every coach design. Plan now to avail yourself of the many advantages of Edwards Double Glazed Dehydrated Sash.

The O. M. Edwards Co., Inc., Syracuse, New York

EDWARDS SASH

THE EYES OF TRANSPORTATION

SH FOR EVERY TYPE OF TRANSPORTATION — ON LAND, ON THE SEAS, IN THE AIR

Built to RR. Specifications

On every count, Cummins Diesel power measures up to the rigid performance standards demanded in modern railroad equipment.

Higher operating speeds and extensive use of lighter, stronger materials reduce engine weight and size—increase *payload* capacity. Rugged, precision construction, easy accessibility of parts, and unit removal of accessories assure lowest upkeep cost and day-after-day dependability. The *exclusive* Cummins Fuel System provides maximum fuel economy, a smoother running, more flexible engine, and quick cold weather starting.

For the power plant—motive or auxiliary—in the locomotives, motor trains and other passenger equipment you are now designing or will operate tomorrow, choose the diesels that are built to railroad specifications—Cummins Dependable Diesels, 125 to 475 hp.

CUMMINS ENGINE COMPANY, INC., Columbus, Indiana.

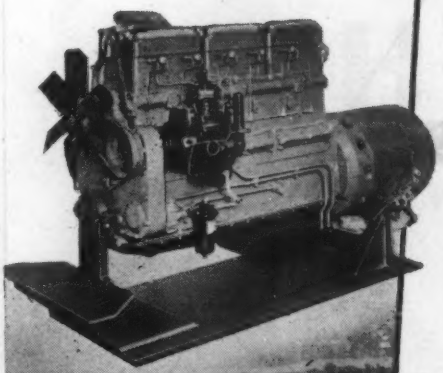


Photo courtesy Norfolk & Western Ry.

CUMMINS DIESELS

SINCE 1919...PIONEER OF PROFITABLE POWER THROUGH HIGH SPEED DIESELS

Rock Island Lines Now Operating

Motorola F-M 2 way Radio Station

SCOPE OF SERVICE

The Motorola system, installed in the classification yards of the Rock Island Lines at Blue Island, Ill., provides radiotelephone service between the freight dispatcher and the train crews and between the engine cab and the caboose.

ANOTHER Motorola Radio FIRST

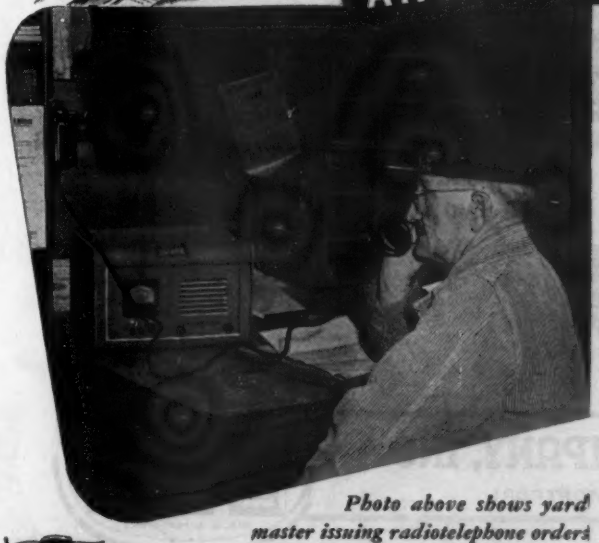


Photo above shows yard master issuing radiotelephone orders to engineer in cab, top photo.

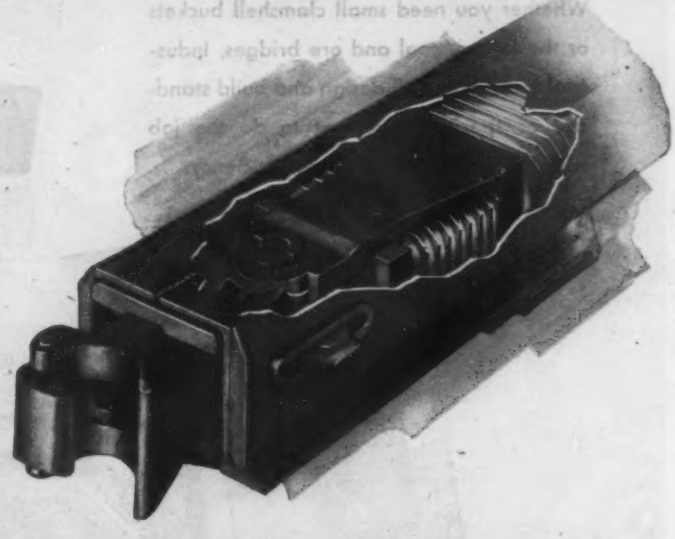
WHAT THIS MEANS TO YOU

The Motorola F-M 2-way Radio Station operated by Rock Island is the *first* Railway Radio Station licensed by the Federal Government and is another notable Motorola First. The benefits of such an installation can also be obtained by you. The famous "Handie Talkie," another exclusive Motorola First, will be made available for Emergency use as soon as our current obligations to our fight for victory have been completely fulfilled.

For Full Details, Write To:

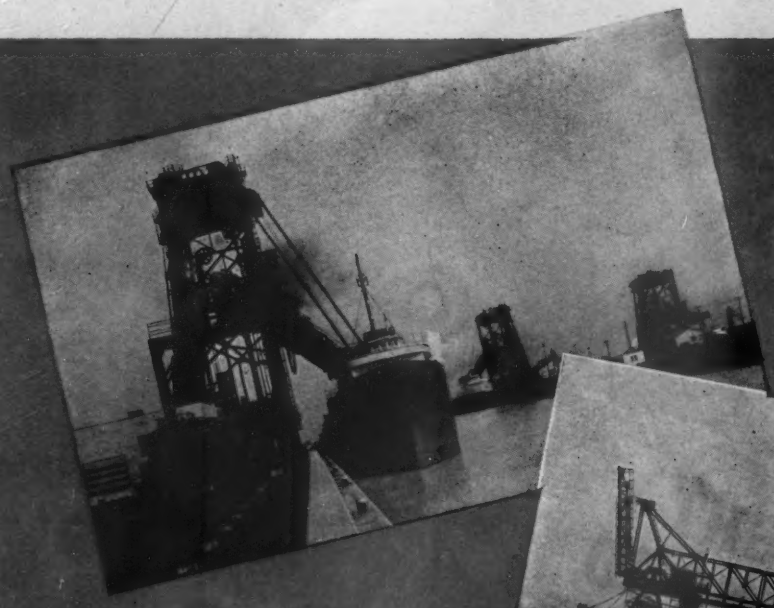
GALVIN MFG. CORPORATION · CHICAGO 51

STREAMLINE passenger trains set the pace. Now freights, too, go modern. Tomorrow's high speed freights, like today's fast streamliners, will be cushioned against jolts, jerks and jars with Waughmat Twin-Cushions. They will start gently, ride smoothly and stop softly. Lading will be well protected against damage in transit. Write for details.



WAUGHMAT *Twin Cushions*

Waugh Equipment Company, New York, Chicago, St. Louis • *Canadian Waugh Equipment Company, Montreal*



Left: Three Industrial Brownhoist high-lift electric car dumpers, capable of handling sixty cars per hour, each car carrying up to 120 tons of coal. Below: An Industrial Brownhoist 20 ton movable ore bridge used for unloading and storing iron ore. Bridge span is 344 feet center to center of the pier and shear legs with a reliable apron extending 114 feet out from the center line of the pier leg on the dock side.

Industrial Brownhoist Material Handling Equipment

Industrial Brownhoist manufactures equipment for handling all types of materials. Whether you need small clamshell buckets or the largest coal and ore bridges, Industrial Brownhoist will design and build standard or special equipment to do the job with the greatest speed and efficiency.

Above: An Industrial Brownhoist 50 ton electrically operated dry dock crane. Main hoist has a capacity of 112,000 lbs. at 95 feet; auxiliary hoist 33,600 lbs. at 133 feet and whip hoist 11,200 lbs. at 138 feet. Left: A typical Industrial Brownhoist gasoline or diesel locomotive crane for use with magnet, hook or bucket. Patented Monitor-type cab allows 360° visibility and increases operator efficiency

INDUSTRIAL BROWNHOIST CORPORATION • BAY CITY, • MICHIGAN

DISTRICT OFFICES: New York, Philadelphia, Cleveland, Pittsburgh, Chicago • Agencies: Detroit, Birmingham, Houston, Denver, Los Angeles, San Francisco, Seattle, Vancouver, B.C., Winnipeg, Manitoba, Canadian Brownhoist, Ltd., Montreal, Quebec

LARGE CONCRETE PILES

for Bridge Replacement

Large reinforced concrete piles ranging from 45 to 65 ft. long, replaced an old timber trestle approach in reconstructing a double track bridge for war traffic on the Norfolk & Western Railway.

The new concrete piles were handled by a locomotive crane which removed the old timber structure ahead of the pile driving operation.

The 256 concrete piles required were cast in a yard set up at the site. Caps and slabs for the approach spans were cast in place.

Our engineers, experienced in design and construction, are available to help with your concrete problems.

PORTLAND CEMENT ASSOCIATION

Dept. 9d-26, 33 W. Grand Ave., Chicago 10, Ill.

A national organization to improve and extend the uses of concrete ... through scientific research and engineering field work

BUY MORE WAR BONDS

Norfolk & Western work crane lifts huge reinforced concrete piles from flat cars to be set in position on bridge reconstruction project near Suffolk, Va.

BERNARD WAHLE, *President,*
National Trailways Bus System . . .

"After the war Americans will be traveling more than ever before, both for business and pleasure. One of the ways in which the bus industry will bid for patronage will be with new and modernized buses having the latest features and equipment for passenger comfort. For instance, we feel that . . ."

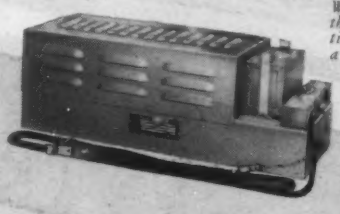
"...FLUORESCENT LIGHTING IS A MUST FOR POST-WAR BUSES."

Mr. Wahle, you *can* have fluorescent lighting in your buses after the war. Electronic Laboratories is ready now with Vibrator Power Supplies to make it possible. These E-L Power Supplies convert the low-voltage DC from the electrical system of any bus to the necessary voltage to operate the fluorescent lamps needed, with either individual or group control. This means far more and better light with no increase in battery drain. The long-life and dependability of E-L Vibrator Power Supplies have been thoroughly proven on all the battlefronts of the world in the present war. Engineered to specific voltage and space requirements, E-L Power Supplies also are used to provide the proper voltages for radio and two-way telephone, as well as fluorescent lighting, on buses, trains, boats, and planes. Let E-L engineers consult with you on fluorescent lighting, as well as any of your other power supply requirements.

E-L POWER SUPPLY FOR FLUORESCENT LIGHTING IN BUSES
MODEL 1547

Models available for fluorescent lighting in buses with 12, 24 and 32 volt DC electrical systems. Power Supply illustrated above will operate four 30-watt fluorescent lamps in parallel. Other units available to operate the lamps in series as well as a greater number of lamps.

Write for further information of this and other models.



ARMY NAVY

Electronic LABORATORIES INC.
INDIANAPOLIS

VIBRATOR POWER SUPPLIES FOR LIGHTING, COMMUNICATIONS, AND ELECTRIC MOTOR OPERATION • ELECTRIC, ELECTRONIC AND OTHER EQUIPMENT

BALDWIN SERVES THE NATION WHICH THE RAILROADS HELPED TO BUILD

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 117 September 23, 1944 No. 13

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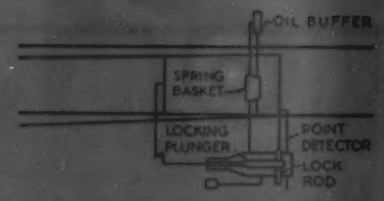
In This Issue

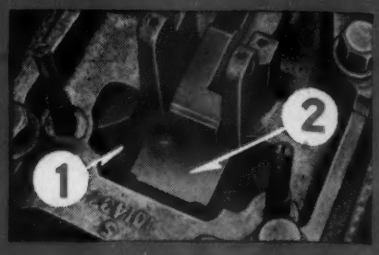
The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

★

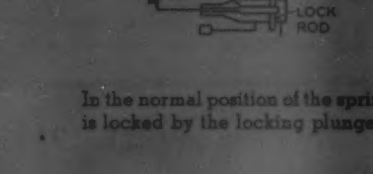
PRINTED IN U. S. A.

THIS IS WHAT HAPPENS . . .





In the normal position of the spring switch, the standard lock rod (1) is locked by the locking plunger (2) of the Mechanical F.P. Lock.



The flexing of the switch points by the leading wheels of the train withdraws automatically the locking plunger from the lock bar before the spring head rod starts to move.

As the train advances, the unlocked points are forced open against the spring action of the switch to permit trailing move . . . and after the train has cleared the switch, the points are returned to normal and locked for subsequent moves.

. . . when a train trails a spring switch equipped with a "Union" Mechanical F. P. Lock!

FOR trailing moves against the closed point, the "Union" Mechanical Facing Point Lock retains all of the advantages of the spring switch. In addition, high-speed, facing-point, main-line moves can be permitted safely because the mechanism securely locks the switch points against movement from the impact and vibration caused by a passing train. A built-in circuit controller for signal control checks the positions of the locking plunger and the switch points . . . "Union" Mechanical Facing Point Locks also have reduced operating costs, decreased train running time and, in some instances, have effected fuel savings sufficient to pay for the costs of the installations in a surprisingly short time.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

3118

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

TRUTH BEING SNOWED UNDER: Probably the most actively sloganized contentions regarding transportation are (1) the "truck barrier" myth, (2) the assertion that "54,000 communities" are without railroad service and rely entirely on highway transportation, and (3) the claim that trucks haul a "vital fifth" of the nation's traffic. The A. A. R.'s economist, Dr. C. S. Duncan, in this issue analyzes contentions (2) and (3) and reveals them to be without factual foundation. Nevertheless, such mischievously propagandized concepts as these undeniably do the railroads and the public interest in their welfare great harm, by distorting popular understanding of the relative economic importance of railroad service. Still, as an editorial in this issue points out, nothing is being done to correct the injurious errors into which public opinion is certain to be led from unchallenged repetition of such misleading statements; nor is there any source of popular information which is endeavoring to give the public an accurate understanding of the comparative importance of the several agencies of transportation. If public policy goes amiss (as it can hardly fail to do, seeing the lack of accurate information upon which popular judgments may be based) whose fault will it be?

●

SENATORIAL INDICTMENT: Calling the recent peculiarly unfortunate collision near Terre Haute, Ind., "one of a long series of preventable wrecks," Senator Wheeler — to whom Congress generally listens when he is talking about transportation questions—has severely lambasted the railroads, and particularly their directors, for not installing safety devices which he says have long been available, and at the same time has reproved the I. C. C. for its "inaction" in requiring such installations. Unless the railroads "move in dead earnest," he declared, "the government will act." His views are set forth in the news pages.

●

DEAD LOAD RATIO UP: With all the talk about reducing the ratio of dead weight to pay-load, the fact persists that the railroads are today hauling around more of the former than of the latter; and the situation has not improved, either, over the past 20 years. For example, the net tons per train rose from 708 in 1920 to 1,035 in 1942—but gross tons climbed from 1,443 to 2,277. To haul 327 more tons of pay-load per train, the railroads had to take on an increase of 1½ times that magnitude in dead weight. On another page in this issue a timely article by Herbert Ashton of the O. D. T. goes into this disturbing situation, which looks as if it would have to be worked on some, if post-war prospects are to be limned in adequately rosy tints.

●

6 MONTHS' PURCHASES: The railroads spent over $840 million in the first half of 1944, for supplies to keep their service to the public in operation. The total (which includes fuel) represents an increase of 27 per cent over the first half of 1943. An article by our purchases and stores editor, in this issue, analyzes these expenditures—breaking the figures down into the classes of commodities acquired, and showing also comparisons with previous years and outlays by individual railroads.

●

WAR HITS WOOD TREATING: Government limitations on the use of wood —plus the shortage of labor—did not permit the wood-preserving industry to chalk up quite as remarkable a record of progress for '43 as it would have done under more favorable auspices. At that, though, the total of wood receiving preservative treatment last year is impressive—261 million cubic feet, a volume which has been exceeded only 4 times since 1930. The railroads continue to be the nation's principal consumer of treated wood. Figures on the industry's last-year production are given in an article in this issue, which also discloses the comparative use of the various types of treatment.

●

READY FOR RADIO: That the railroads are alive to the possibilities of adapting radio to their everyday requirements was evident in the mass of testimony just taken by the F. C. C. on the need for wave channel assignments for railroad use, reported this week on page 472. Spokesmen for roads in all sections of the country assured the commission that, given the opportunity, they are ready and willing to use radio in yard and terminal operations and in end-to-end of train and train to wayside station communication. Other applications are under intensive development. Emphasis was put on the advantages radio offers in saving train time and avoiding emergency stops. While important safety features were not discounted, it was apparent that the railroads, unlike certain laymen, expect the radio, as now developed, to perform few miracles in this direction, and there was no indication that any less reliance will be put on already standardized safety practices and devices.

●

AT LONG LAST: Making its unwilling and almost unnoticed exit in a state of utter confusion, the Transportation Board of Investigation and Research under statutory compulsion passed out of existence on September 18, leaving as its tottering monument a mass of undigested material in which the results of studious research appear often to have been submerged under the weight of a board member's preconceived opinions. What there is of merit to be salvaged from this aggregation of words and figures, what the nation's taxpayers are to get, in the long run, for the $1,121,500 this board was given to spend in the more than three years that it functioned—these are questions still unanswered, buried in a tremendous heap of typescript dumped at the very last minute of the last day into the lap of the Congress which the board was supposed to aid and advise. Some of its conclusions and recommendations are summarized in an article beginning on page 468.

HILLMAN FOR BOSS?: The paper "Labor" a few weeks ago had an editorial taking out after Sidney Hillman and his "slush fund" (as they called it) activities in behalf of the candidate for perpetual president. It looked then as if the brothers were cool to the idea of having Sidney as the nation's labor czar, as unquestionably he would be if his political efforts should prove successful. Now comes "Labor" in its September 16 issue, though, and heaves a brick at Tom Dewey—going out of its way to find something to rap him about by objecting because, it seems, he favors freeing radio from political domination. Maybe the brothers still don't want to have to call Sidney their boss, but their paper doesn't seem overly perturbed at the prospect—to judge from its zeal in slapping down the only man who can put Sidney back in the pants business.

●

FRIEND MAKERS: When the compliments that deservedly are coming the way of the railroads for the manner in which they have done their war work are being passed around, a substantial share easily belongs to a group of railroaders the general public probably knows little about—the boys in the car department. As an editorial this week points out, they not only have put a lot of the hardest kind of labor into the job of keeping the cars moving—even the cripples that were headed for the scrap pile—but they have carried a very important part of the industry's public relations burden through their constant contacts with shippers, individually and in local committees, in the interest of good loading practices and less lading damage.

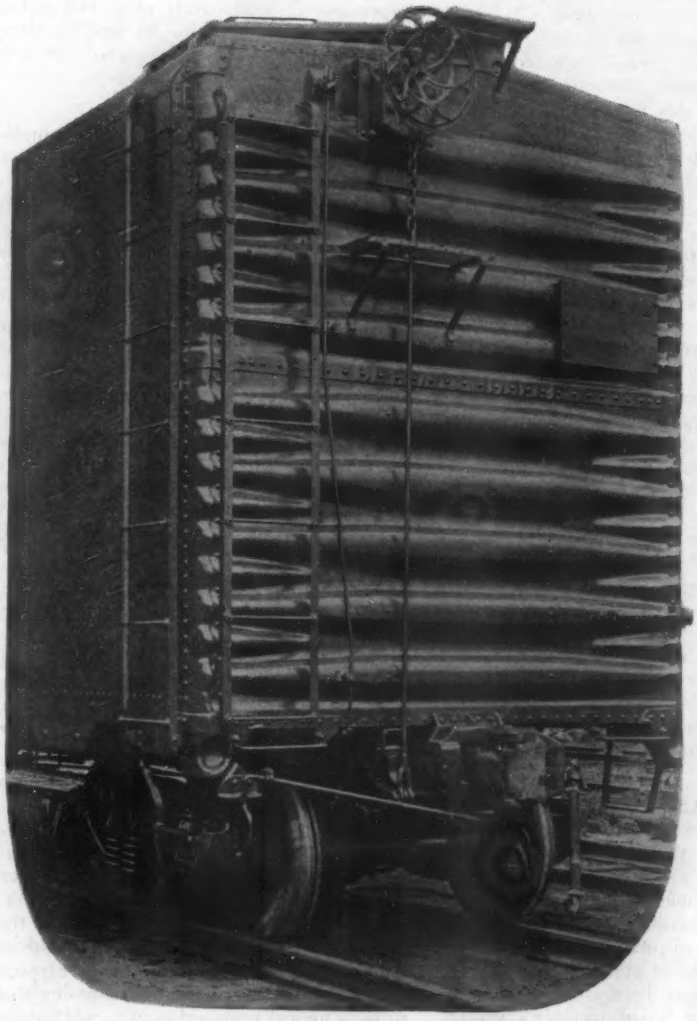
●

IT'S ALL CLEAR NOW: The distinguished railroad rate expert, second-Biddle Berge of the Department of Justice, continues crusading through the West as the champion of that—he says—industrially backward section, boldly offering battle to those evil-doing, high-riding "monopolies," the railroads. What the West must do, he declaims, is to get freight rates down; with such "discrimination" removed, western industry will proceed to flourish magnificently (except, of course, the transportation industry). But what would happen under such conditions to eastern industry, which, according to this savior of the private enterprise system, has been fattening on these rate advantages at the expense of the rest of the country? Supposing this to be a logical proposition, it would follow that the economic applecart would be upset; the East's industries would languish; that section would become the area which it might be politically expedient to commiserate with as the victim of "discrimination." The remedy? Lower freight rates some more, no doubt. And then it would be the West's turn again, and pretty soon the railroads' pockets would be too flat even to make a trip through the "wringer" worth while. What a simple way to arrive at Mr. Berge's goal, which is (he says) to foster local economic autonomy based on a durable system of competitive enterprise!

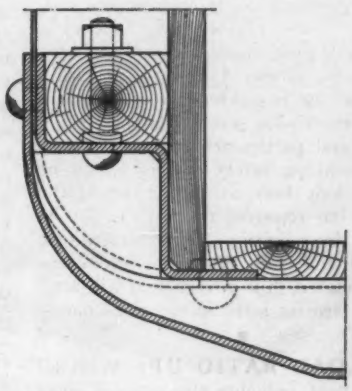
DREADNAUGHT ENDS

WITH ROUND CORNERS

IN COMBINATION WITH W-SECTION CORNER POSTS



PROVIDE THE INCREASED STRENGTH AND RESILIENCY REQUIRED TO PROTECT CAR AND LADING WITH PRESENT HIGH SPEED FREIGHT



W-SECTION CORNER POSTS FURNISHED BY BUILDER

STANDARD RAILWAY EQUIPMENT MFG. COMPANY

HAMMOND, INDIANA

WORKS: HAMMOND, INDIANA NEW KENSINGTON, PA.

CHICAGO OFFICE — 310 S. MICHIGAN AVE.

RAILWAY AGE

Distorters Dominate in Transport Publicity

In the *Railway Age* of August 12, 1944, page 272, was published a letter by W. R. Scott, executive secretary of the Kansas City Board of Trade, in which he took moderate exception to our persistent criticism of organized business interests for their tolerance and even favoritism of socialistic policies in transportation—at the same time that they angrily insist on elimination of such policies toward their own businesses. Mr. Scott expressed the opinion, in substance, that business men have adopted their misguided and inconsistent policies toward transportation from misinformation—because the enemies of the railroads have done a more skilful and persistent job of inculcating distorted opinions regarding transportation than the railroads have done in educating the business community to a factual perspective toward the various segments of the industry.

Dr. C. S. Duncan, economist for the Association of American Railroads, in an article in this issue, signalizes and analyzes two widely current inaccuracies which are being tirelessly repeated—and public acceptance of which is highly damaging to the relative economic importance ascribed to the railroads. One of these statements is the sloganized contention of organized long-haul truckers to the effect that "trucks haul a vital fifth of America's land-borne freight." The other is the assertion that "more than 54,000, or 43 per cent, of all the country's communities are served by motor truck and coach transport alone."

As Dr. Duncan makes clear, this last-mentioned declaration, when subjected to critical analysis, is found to be utterly lacking in significance. It nevertheless serves the purpose of confusing popular understanding of the relative importance of commercial motor transportation in comparison to railroads, and is used as an effective argument against subjecting such vehicles to fees which would make their service come closer than it now does to self-support.

To say that "54,000 communities" are dependent on truck and bus service is to say, more accurately, that railroads do not deliver every package of freight and every passenger to their ultimate destination—a truism which means nothing, and which, if thus expressed in non-deceptive language, would cause no realist to magnify his opinion of the importance of motor transport. It does not speak very highly of the confidence of commercial automotive interests in the merits of their wares that they attempt to influence public policy toward them by a skilfully-nurtured inflation of their actual economic importance.

At the same time, it does not speak very highly of the alertness of the railroads and their concern either for their own welfare or that of the public in an economic division of the country's traffic among the several types of transportation, that they permit such palpable distortions of fact to be relentlessly ding-donged into the public ear without any adequate challenge. The railroads should not engage in a name-calling publicity battle with their adversaries; but that is not the only alternative to silence. A forceful, continuous, widespread and economically enlightening presentation of an accurate perspective of the transportation industry, with each segment shown in its natural complementary relation to the others, could ignore all controversy—but it would, in time, give the public information from which sound judgments could follow.

The public cannot be expected to know the truth about transpor-

tation and to be governed accordingly if those who possess the truth and the means of disseminating it hide their light beneath a bushel, leaving the field of popular education in transportation to distorters and prevaricators.

Salesmanship by Car Men

It is hardly fair to single out any one group of railroaders for commendation because of outstanding performance in handling so successfully the record-breaking war traffic. It may not be out of place, however, to recognize one group which, in a quiet way, has made a splendid contribution that has not only made warm friends for the railroads on the part of shippers and receivers of freight, but will undoubtedly exert a favorable post-war influence in enabling the railroads to retain freight business. The Mechanical Division, A. A. R., and particularly the car department officers and employees, have not only had the difficult task of keeping the car equipment in condition to handle all sorts of commodities—many of them bulky and of awkward shapes—safely and expeditiously, but they have had to work intimately with the shippers in solving difficult and complicated loading problems.

Many industries have engaged in the manufacture of new products requiring quite different handling than their normal peacetime output. New industries have grown up whose managements lacked experience in loading and shipping practices, including the securing of loads on open type cars, clearance limitations, and numerous other shipping requirements. The Mechanical Division, with the increasing traffic, and even before our country entered the war, recognized the difficulties involved and took unusual measures to meet them.

The individual railroads were urged to conduct campaigns to familiarize the shippers with the requirements for the proper loading of cars and adequately securing the loads to prevent damage and delay to shipments, and avoid the necessity for adjusting loads en route. As the intensity of production increased, this proved to be a formidable task, and today 51 committees are functioning actively at the more important loading and interchange points.

These local committees include mechanical department officers and supervisors, largely from the car department, as well as representatives from the transportation department and from the shippers. In general, they meet about once a month, but they are supplemented with subcommittees which meet at more frequent intervals and actually visit plants and terminals to check conditions and work out problems on the spot. It is only in this way and by the most persistent and painstaking effort that the needs of the shippers have been met with such signal success. It has been no easy or simple task; rather it has required long hours of continuous effort and of the hardest sort of work. The car men have been "run ragged," but they can take a lot of satisfaction from the cordial appreciation of many of the shippers, as well as of the Army, with whose transportation representatives the car men have worked in closest harmony.

Incidentally, there have been few more spectacular events in railway war operations than the way in which the car department quickly got the tank cars back into service to handle the oil shipments to the east coast. A large proportion of these cars had been sidetracked and were headed for the scrap pile. It required a stupendous effort to put them back into operation—a tribute to the ingenuity and the intelligent and almost back-breaking effort of the car department. Even at that, the task was only well started for, as rapidly as possible, additional repairs and improvements had to be made to this equipment, which has been operated under the most intense conditions.

The car department has met its responsibilities squarely and successfully. Moreover, it has discharged them in such a way as to make warm friends for the railroads among the shippers—an end much to be desired, and which, let us hope, will pay dividends in future business.

The Safety Factor in Train Communication

The railroads and interested manufacturers, appearing before the Federal Communications Commission, have just concluded the presentation of evidence on the value of train communication systems. This evidence will form the basis of the railroads' appeal for radio channel assignments to be made at another hearing scheduled for October 28, 1944.

Information produced at the hearing showed clearly that train communication is a valuable asset to railroad operation. Its value as a safety device is less clear, since safety is so well provided for and causes of accidents frequently range among the intangibles. It is possible to see definitely a few ways in which train communication can promote safety. It permits the conductor of a freight train to advise the engineman of dragging equipment, hot boxes, clearances at switches, and avoids the need of braking the train from the rear. It can be used to advise dispatchers and other trains instantly of derailments, and in case of accident it can be used to instigate corrective measures immediately.

Unfortunately, for the case in point, it is primarily a device for improving operation; and if the railroads are to receive radio channel assignments, they must show that these assignments are in the public interest. Probably the best testimony presented for this purpose was offered by J. H. Aydelott, general manager, Chicago, Burlington & Quincy. He said, in substance, that safety is dependent on orderly operation, and since train communication facilitates orderly operation, it also promotes safety. Not all the emphasis in the appeal,

however, need be placed on safety alone. To be efficient, a railroad must operate with military precision, and as a military asset, the railroads have proved themselves to be the most important form of domestic transportation in war time.

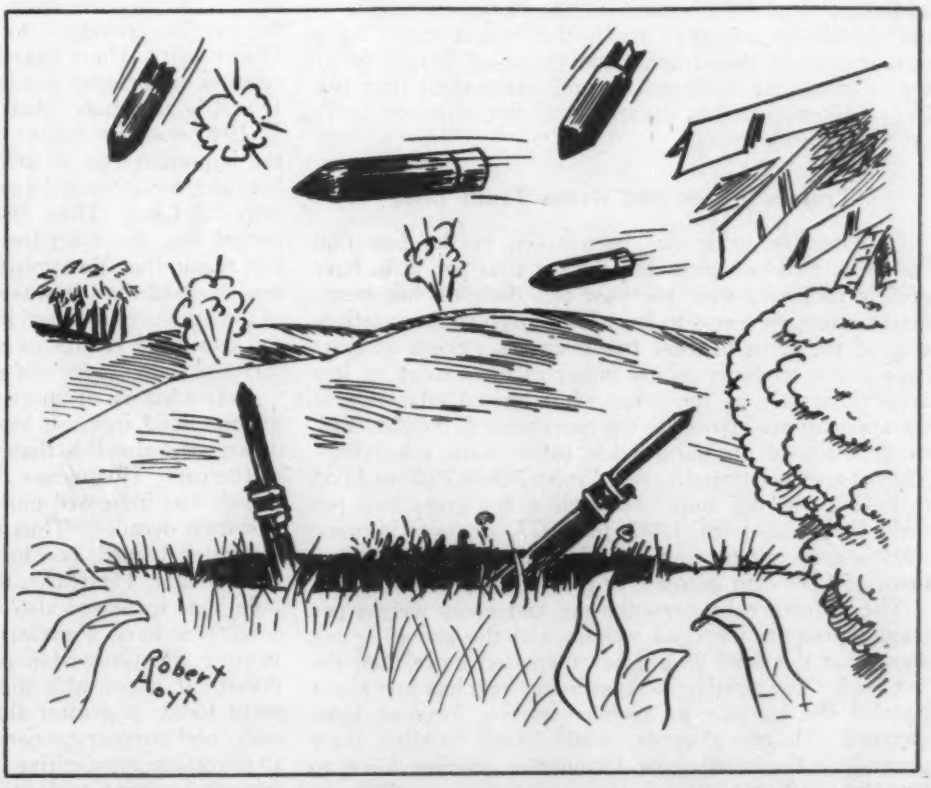
After the war, the railroads must be rehabilitated, and it is in the public interest that this be done by means that can perform the task adequately at the lowest cost. The country is still engaged in war and the need is now even more important, but either now or later, the public will benefit from any device or procedure which improves both railroad operation and safety.

Two Viewpoints on the Benefits of Signaling

In the course of the past year two railroads have arrived at decidedly different opinions concerning the installation of modern signaling facilities on extended sections of railroad including one or more sub-divisions in each instance. On one railroad, certain operating officers arbitrarily declared that they would not agree to any proposal which might result, years later, in blame for having "loaded" the division with an investment for centralized traffic control. As a result, ordinary automatic block signaling was authorized. One point of importance is that automatic signaling requires certain expenditures which are not necessary in centralized traffic control, thereby, to a limited extent, offsetting the difference in costs. Of greater importance, however, is the fact that with automatic block signaling only, the practice of authorizing train movements by timetable and train order must be continued, and the train delays and operating expense for open offices which are necessary in that system, will also be continued to a large extent.

Another railroad, with operating conditions and traffic somewhat similar to those on the road discussed above, was giving consideration to the installation of signaling facilities. On this second road there is a man who had worked his way up through various positions in the roadway department, including division engineer, and in the operating department, including division superintendent, and who was later promoted to an executive position where he had the responsibility for determining whether the investment for proposed signaling on a certain division would produce better results, dollar for dollar, than would be the case if the same money were spent for other purposes.

In these deliberations consideration was given not only to the necessity of handling heavy wartime traffic for the duration, but also to two important factors in the post-war years—i. e., reduction of overall time of trains between termini, and holding of operating expenses to a minimum; attainment of both these objectives being necessary to meet post-war competition with other forms of transportation. An investigation of various parts of that railroad and on sections of other railroads, as well as a study of published information, led to the conclusion that the installation of centralized traffic control would not only increase average train speeds, but would also effect reductions in maintenance and operating expenses, even with a reduction in the number of trains which may occur when war traffic ceases. An important item was that the centralized traffic control would obviate the train delays which are inherent in the timetable and train order method of authorizing train movements on single track. A recommendation by this executive to install centralized traffic control as soon as practicable was adopted by the management as an important item in the program for war and post-war.



"It kinda looks to me like the government could do better than 'biddle' the railroads when we're still short of stuff out here."

Freight-Car Weight Increases

Deadweight of cars in trains has grown out of proportion to the increase in payload — Enlarged car size and capacity not utilized to obtain potential savings

By Herbert Ashton

Assistant to Director, Division of Railway Transport, Office of Defense Transportation

IN dealing with the question of post-war planning by the railroads which has been very much in the foreground of discussion recently, the subject of car design, both freight and passenger, has been mentioned on more than one occasion, and with respect to freight cars the relationship of dead weight to payload has been indicated specifically as requiring attention.* The following points are offered, therefore, at the risk of some repetition in order to show what has actually transpired during recent years and to point out certain specific results of these developments.

Wastes in applying the energy necessary to move freight have been given considerable attention with the result that power efficiency has been greatly increased. Fuel consumed per 1,000 gross ton-miles has been considerably reduced by various improvements in the design and utilization of locomotives; but much of this improvement in the efficiency of the power unit has been vitiated through expenditure of tractive force in hauling additional dead load because of the increased weight of the vehicle of transport itself, the freight car. As a consequence in the ordinary movement of freight today the railroads are hauling a greater deadweight than pay load. Moreover, this situation has not improved over the past twenty years.

Trends in Net and Gross Train Load

Considerable pride has been taken in the fact that the gross tons per train and the net tons per train have greatly increased over the past two decades, but insufficient attention seems to have been given to the relationship of the gains in these two averages. Some analysts have had a tendency to use either of them more or less indiscriminately as measures of increased efficiency in the application of power to the movement of freight. But, examination of the gains made raises some misgivings. The net tons per train increased from 708 in 1920 to 1,035 in 1942, or by 327 tons. Meanwhile, the gross tons per train increased from 1,443 to 2,277, or by 834 tons. This is a 46 per cent increase in net tons per train and nearly 58 per cent increase in gross tons per train.

The difference between the net and gross weight per train represents the dead weight, and the above figures show that the dead weight has increased more than the live load. The relative increase in net load has just about equaled the increase in average tractive force of locomotives. In other words, while barely holding their ground in the relation of locomotive tractive force to pay load hauled, the railroads have increased the dead weight included in the trainload both in actual amount and in proportion to the total train weight. The locomotives are doing more work today than twenty years ago, but a greater proportion of their total tractive force is consumed in moving weight, which adds nothing to the return.

Table I shows that the dead weight hauled per train in 1920 represented 104.4 per cent of the cargo tons, and in 1942 the ratio of dead weight to net load had actually increased to 120 per cent of the net load. The excess of dead weight over net load increased over this period from 27 tons per train in 1920 to 207 tons per train in 1942. The average locomotive tractive force increased between 1920 and 1942 by more than 40 per cent. It is evident, however, that a considerable portion of this increase in power has been expended in hauling an increased proportion of dead weight in each train.

The factors involved in this situation include the weight of the car in relation to its capacity, the average carload related to capacity and the relative empty movement. Considering these factors in the order named, the tendency over the past two decades has been to increase the size of the car. This policy is based on the proposition that the larger car offers less resistance per unit of load, thereby improving the efficiency of train operation. But, increasing the size of the car increases its weight, and increasing its capacity increases only the proportion of *potential* load to gross weight hauled. This *potential* increase in load must be translated into actual achievement in order to produce a real gain.

The table shows what has actually been accomplished in this respect. The average car capacity has been increased between 1920 and 1942 by 8.1 tons or by 19 per cent. During this same period the average weight of the car has increased by a little less than 3.4 tons or 17 per cent. There has, therefore, been a net gain in the relation of *potential* pay load to gross weight per vehicle. It will be noted also that the average actual load per car in 1942 was the largest recorded up to that time; but the important fact in this connection is that the average load per car increased from 29.6 tons to 31.8 tons, or by only 2.2 tons. Thus, the increase in carload over this period was less than the increase in car capacity, with the result that the proportion of capacity utilized was less in 1942 than it was in 1920. This was so in spite of the pressures imposed in 1942 as a result of the war and the concerted efforts of railroads and shippers alike to increase the efficiency of equipment utilization.

But, what is of more significance, not only did the average load increase less than the car capacity, its increase was also less than the increase in the tare weight of the car. This means that the dead weight hauled per vehicle has increased more than the pay load over those past two decades. Thus a large part of the increase in ton-miles hauled per locomotive-mile has been purely dead weight. The reason the net ton-miles per locomotive-mile have increased also is, first, because the present locomotives have a greater tractive force, and secondly, because the proportion of empty mileage has been reduced. It is probable that the size of the average shipment today is greater than it will be when the war is over, and current cooperative measures have given way to peacetime competitive practices. This means that with present equipment, the tendency will be for the ratio of net load to dead weight hauled per car to decline.

* See *Railway Age*, February 19, 1944, pp. 386 and 391; April 15, 1944, p. 728.

In the light of the situation presented here, and the probability of a further reduction in the average load per car with the reinstatement of peacetime carload minima after the war, which may even be reduced below former levels as a result of the increased intensity of competition among the different transportation agencies for many kinds of commodities, it may be a fair question as to whether the tendency to keep increasing the size of cars can be justified, particularly with respect to certain types of cars. Is it sound practice, for example, to build 100,000-lb. capacity box cars with the increased tare weight involved when for a large part of their time they are carrying loads of 30,000 lb. or less?

The answer, which is readily suggested, is that the capacity of cars by weight cannot be used as the sole criterion because of the great number of commodities transported which are bulky in proportion to their weight and so take up the cubical capacity of the cars considerably before the weight limit is reached. Moreover, the danger of the loss to competing agencies of traffic moving in small lots has to be considered. But this is not a complete answer. A realistic approach to this question demands consideration of the merits of building the car to conform more closely to the size of the average load. This may mean the construction of special container cars or some such development. Merchandise l. c. l. shipments alone amounted to more than 20 per cent of all carloadings before the war, and with the hand-to-mouth purchasing policy which was spreading rapidly the tendency will be toward smaller average shipments with faster, more frequent service.

The discussion so far has given consideration to operating costs but not to maintenance costs and other expenses which are affected by car design, such as loss and damage. Table II gives the freight-car repair costs and loss and damage charges over the period from 1920 to 1942. Examination of these figures indicates that while no positive conclusions can be derived from them, they offer strong circumstantial evidence of considerable savings in maintenance costs, resulting from improved car design. The fact that a huge increase in traffic has been handled with about 25 per cent fewer freight cars than were owned twenty years ago is itself evidence of increased intensity of utilization. This might, of course, result from a mere reduction in surplus and have nothing to do with availability resulting from improved design. As a matter of fact, however, the situation in 1920 was very mixed, involving both large surpluses and large shortages during the course of the year. There was a maximum shortage of 147,000 cars in the early part of the year which was converted into a maximum surplus of 204,000 cars at the end of the year. There were no important shortages after this time, except in 1923 when shortages of 70,000-74,000 cars were reported during the first quarter, partly as a result of the shop strikes. The previous record traffic of 1929 was handled with a continuous surplus which amounted to 107,000 cars

(*Continued on page 471*)

Table I—Relation of Dead Weight to Net Load Per Train

Year	Rev. cars, average capacity, tons	Average tare tons per car	Net load per car tons	Per cent capacity utilized	Average cars per train	Net tons per train	Tons dead weight per train	Dead weight, per cent to total	Dead weight, per cent to load
1920	42.4	20.1	29.6	69.8	36.6	708	735	50.94	104.40
1921	42.5	20.4	27.6	65.0	38.4	651	784	54.63	120.43
1922	43.1	20.5	26.9	62.5	38.4	676	788	53.83	116.56
1923	43.8	20.7	27.9	63.7	39.9	713	826	53.67	115.84
1924	44.3	20.9	27.0	61.0	41.7	715	873	54.97	122.09
1925	44.8	21.1	27.0	60.3	43.8	744	926	57.86	124.46
1926	45.1	21.3	27.4	60.8	45.2	772	914	55.52	124.87
1927	45.5	21.6	27.2	59.8	46.5	777	1,003	56.35	129.00
1928	45.8	21.7	26.7	58.3	48.1	792	1,044	56.86	131.81
1929	46.3	21.9	26.9	58.1	48.6	804	1,061	56.89	131.96
1930	46.6	22.2	26.7	57.3	48.9	784	1,086	58.07	138.52
1931	47.0	22.5	25.7	54.7	47.9	733	1,077	59.50	146.93
1932	47.0	22.7	24.9	53.0	44.8	663	1,019	60.60	153.84
1933	47.5	22.8	25.6	53.9	45.8	699	1,051	60.33	150.35
1934	48.0	22.9	25.6	53.3	46.2	706	1,057	59.95	149.71
1935	48.3	23.1	25.9	53.6	46.2	734	1,061	59.20	145.14
1936	48.8	23.2	26.8	54.9	46.8	774	1,086	58.38	140.31
1937	49.2	23.2	27.1	55.1	47.6	796	1,106	58.15	138.94
1938	49.4	23.6	26.1	52.9	47.7	759	1,136	59.95	149.67
1939	49.7	23.6	26.9	54.1	49.1	813	1,171	59.02	144.03
1940	50.0	23.6	27.6	55.2	50.3	849	1,198	58.52	141.11
1941	50.3	23.6	28.4	56.5	50.7	915	1,210	56.94	132.24
1942	50.5	23.5	31.8	63.0	52.2	1,035	1,242	54.55	120.00

Source: American Railway Car Institute.

Table II—Freight-Car Repairs, Class I Railroads

Year	No. of ry. frt. cars owned	Cars in need of repairs, monthly avg.	Per cent in bad order, monthly avg.	Freight car repairs: Total cost (000)	Freight car repairs: Average cost per car	Freight car repairs: Cost per car mile*	Loss and damage (frt.) (000)
1942	1,798,146	54,680	3.2	$303,382	$172.26	$.00897	$36,365
1941	1,755,598	85,004	5.2	257,881	149.46	.00894	24,505
1940	1,706,387	141,287	8.8	194,240	115.96	.00800	21,764
1939	1,702,968	205,690	12.6	169,424	101.35	.00762	20,683
1938	1,754,160	222,905	13.2	133,884	77.75	.00663	20,411
1937	1,779,886	189,781	11.1	197,266	111.67	.00832	27,177
1936	1,813,837	249,573	14.2	183,002	101.00	.00809	21,260
1935	1,892,375	280,573	15.1	144,676	77.78	.00748	18,285
1934	1,999,386	295,154	15.1	131,363	66.90	.00688	16,214
1933	2,099,948	290,819	14.1	119,477	57.96	.00677	14,308
1932	2,213,266	231,434	10.8	120,548	54.61	.00701	17,303
1931	2,275,137	172,608	7.8	187,609	84.14	.00856	23,882
1930	2,352,046	139,326	6.2	262,884	114.01	.01010	31,215
1929	2,353,918	136,554	6.0	338,079	144.59	.01148	35,564
1928	2,377,639	143,196	6.2	325,279	138.47	.01134	33,154
1927	2,409,864	138,483	5.9	340,696	142.46	.01211	33,976
1926	2,435,269	157,255	6.5	377,703	156.51	.01332	34,268
1925	2,445,408	186,523	7.7	373,314	152.38	.01405	36,915
1924	2,443,005	185,278	7.8	389,926	155.61	.01536	34,345
1923	2,410,077	190,162	8.0	475,434	199.75	.01874	36,265
1922	2,382,336	310,554	12.8	407,566	171.77	.01930	39,905
1921	2,408,597	309,467	13.1	466,568	189.98	.02316	81,276
1920	2,417,999	163,675	7.0	591,545	237.58	.02565	119,825

* Excluding work equipment.
Source: American Railway Car Institute statistics.

Transport Study Board Folds Up

Dies on schedule September 18, after hectic week-end of work assembling reports, 13 of which went to the President and Congress on deadline day

WASHINGTON, D. C.

THE Board of Investigation and Research created by the Transportation Act of 1940 died on schedule September 18 amidst a confusion like that in which it lived. Thirteen reports were submitted to the President and Congress late on the afternoon of the board's last day in office.

The reports were assembled after a hectic week-end of night and Sunday work by members of the board, the few remaining members of its staff, and some former staff members who returned to help out on reports in which they had had a hand. In many cases only the official copies, which had to go to the President and Congress, were assembled. On the 19th, when members of the board—Chairman Robert E. Webb and C. E. Childe—were still at its offices, they had left there no complete copies of such reports as those on Public Aids to Domestic Carriers and Carrier Taxation.

The board sang its swan song to the public in a press release of nine mimeographed sheets. The release indicated very briefly what was in each of the reports submitted, mentioning some of the board's recommendations. It did not indicate wherein the staff reports may have disagreed with the views of the board. Presumably any distribution of the reports to interested parties must await their printing by order of Congress, if Congress should decide to take such action.

List of Reports

In addition to those on Public Aids to Domestic Carriers and Carrier Taxation, the reports which went to the President and Congress included those on Interstate Trade Barriers Affecting Motor Vehicle Transportation; Railroad Consolidation and Employee Welfare; The National Traffic Pattern; Carload Traffic Study, 1939; The Economics of Coal Traffic Flow; Economics of Iron and Steel Transportation; Comparison of Rail, Motor, and Water Carrier Costs; Technological Trends in Transportation, including Post-War Capital Requirements of the Carriers; Practices and Procedures of Governmental Control of Transportation; and Federal Regulatory Restrictions upon Motor and Water Carriers.

Also, there was the board's final report on the Relative Economy and Fitness of the Carriers, embracing, as the press release put it, "all of its recommendations made in connection with its investigations to date, and giving summaries of its major studies." It was in the so-called preliminary report on economy and fitness, reviewed in the *Railway Age* of May 27, page 1029, that the board recommended the creation of three new permanent federal transportation agencies—a federal transportation authority to undertake transportation research, promotion and planning, an office of public transportation counsel to be lodged in the Department of Justice, and a national transportation advisory council. The final economy and fitness report repeats these recommendations which have been embodied in a pending bill, S.2085, introduced by Senator Hill, Democrat of Alabama. The same recommendations also appear in the board's report on Practices and Procedures of Governmental Control of Transportation.

The Public Aids Studies

The press release's summary of the public aids report deals first with the section on land-grant rates and its recommendation favoring repeal of remaining provisions of the land-grant rate law. This is the only part of the public-aids study which was issued prior to the board's deadline day. As noted in the *Railway Age* of March 25, page 605, it was submitted to the House committee on interstate and foreign commerce which was then considering the Boren land-grant-rate repealer which is now pending before the Senate. Reservations which Messrs. Webb and Childe made in connection with their advocacy of land-grant repeal were set forth by them at a Senate interstate commerce subcommittee hearing on the repealer, which was reported in the *Railway Age* of August 26, page 349.

Briefly, Mr. Webb would favor a condition requiring railroads to return to the government granted lands still held, while Mr. Childe would impose no such condition. The latter would, however, follow repeal with a comprehensive investigation of the resulting rates on government traffic, while Mr. Webb would be content to suggest that repeal be taken into account by the railroads and regulatory agencies with a view to determining whether any commercial rates previously affected by land-grant rates need adjustment.

Other recommendations of the public aids report with respect to the railroads call for an I. C. C. review of railway mail pay, "upon return of more normal conditions." The press release says in that connection that the board "notes that available information does not provide an adequate basis for determining the relative costs and advantages in the public interest of transporting mail by rail, air, and highway." On the matter of railroad indebtedness to the Reconstruction Finance Corporation, there is a separate recommendation from Mr. Webb to the effect that the carrier be encouraged to liquidate such obligations "as rapidly as may be consistent with their financial soundness and with the fullest recovery of public funds committed through these loans."

Webb Sees Big Trucks Favored

On the matter of public aids to highway carriers it is recommended that "the Public Road Administration, in cooperation with the states, conduct studies to ascertain whether motor vehicle users as a whole, and by particular vehicle classes, bear an equitable part of road and street costs in the respective states."

"The board notes," the press release continues, "that the present investigation indicates that motor vehicle operators as a class have met their full share of total road and street costs in recent years, Mr. Webb, how-

ever, believes that the groups of large property-carrying vehicles and inter-city buses do not contribute a proportionate share of the aggregate costs chargeable against motor vehicles generally for their road use. He points out that although nearly half of the national total motor traffic operates on city streets only a small porportion of road-use revenue is spent for street improvement, and urges that substantially increased shares of state motor-vehicle tax revenues be made available for city street financing. Mr. Childe's view is that generally the taxes on both heavier and lighter vehicles fully compensate for the highway costs properly chargeable to them, but that in particular states a more equitable apportionment among classes of vehicles is desirable."

Would Consider User Charges on Waterways

On the matter of public aids to water carriers, the board recommends "that existing domestic waterway policies be administered to promote economical, and to prevent wasteful expenditures for navigation projects, and that the economic soundness of individual projects in their relation to other kinds of domestic transportation be considered. Certain changes in planning and administering federal river and harbor projects are believed desirable."

Mr. Webb separately recommended that "Congress consider the feasibility of adopting a system of user charges for waterways improved and maintained at public expense for whole or partial use in domestic commerce"; and that Congress direct the I. C. C. and Maritime Commission "to investigate the practicability of more comprehensive regulation of public and privately owned waterway terminals with a view to preventing undesirable competitive practices and operation of public terminals at a loss." Moreover, Mr. Webb threw in a recommendation on air transport, suggesting that "public policies be directed toward the objective of placing civil air transportation on a self-sustaining basis in all respects as soon as may be practicable."

The staff report on Carrier Taxation, prepared under the direction of Ronald B. Welch, and Mr. Childe's statement sniping at it were reviewed in the *Railway Age* of July 15, page 118. The final report on this subject, as summarized in the press release, contains board recommendations calling for elimination during the post-war period of such taxes on transportation facilities as the federal capital stock tax, the taxes on transportation of property, on transportation of oil by pipeline, and on lubricating oil, and the manufacturers' sales tax on automotive vehicles, parts and accessories.

"It is also recommended," the press release goes on, "that the federal tax on gasoline be identified as a user tax, its proceeds to be expended on highways and airways; that state taxes on motor fuel and on carriers and transportation facilities, except general taxes and taxes for administrative and regulatory purposes, be identified as user taxes to be expended on public facilities provided for transportation use; that Congress should consider changing the federal corporation income tax on carriers for hire to remove discriminations against equity capital; that the Social Security Board and Railroad Retirement Board study the feasibility of equalizing the retirement tax rates upon railroads and their employees with the rates of comparable taxes on other carriers and their employees; and that Congress clarify the tax implications of the commerce clause with respect to taxation of interstate and intrastate carriers."

Another board recommendation is "that Congress implement the recommendations of the Committee on Intergovernmental Fiscal Relations for the establishment of a federal-state fiscal authority to collect and disseminate appropriate allocation data for use in the assessment of carrier taxes; and that the states, assisted by the Council of State Governments, the National Association of Tax Administrators, the proposed federal-state fiscal authority, or other appropriate agencies, adopt a more effective program of carrier taxation by, among other things, providing for central assessment of carrier property, adopting more vigorous policies of equalizing state and local assessments, minimizing duplications of effort, and preventing tax evasion."

Mr. Childe filed a separate statement in an undertaking to offset that finding of the staff report which held that, in 1940, the railroads, oil pipe lines, and intercity bus lines, were relatively more heavily taxed than the intercity truck lines, air lines, and water carriers. He looked over the staff report, and came up with his own conclusion that, despite the foregoing finding, there was evidence that "the taxes of railroads, air lines, and water lines are relatively low, and those of buses, trucks, and pipe lines are relatively high." But Mr. Childe wouldn't be tough on the railroads, for he follows through to suggest that "any moves in the direction of equalization of carrier tax burdens should be toward reductions for highly-taxed highway and pipe line carriers, rather than increasing the tax burden of the relatively low-taxed rail, water, and air carriers." His general conclusion is that "it would seem unwise at this time to consider increasing the tax burdens of any form of transportation."

The "Trade Barrier" Report

The "trade barrier" investigation is referred to in the press release as one which dealt with "burdensome state restrictions on interstate motor traffic, including motor-vehicle size and weight limitations, licensing and taxing requirements, and administrative methods such as the port-of-entry device." While the report on the investigation finds that "state action has failed to deal adequately with the problem," the board does not join in the "considerable agitation for federal action." Its "careful study and appraisal of possible remedies" prompts it to recommend "federal-state cooperation." It believes that such cooperation "would be effectively promoted by a federal-state highway relations committee composed of members whose knowledge and understanding of national and regional conditions would provide valuable guidance for public officials in their consideration of motor-carrier restriction problems."

Meanwhile, the board is of the opinion that the recently proposed 34,000-mile national system of interstate highways "offers one of the more promising opportunities for solving the problems of size and weight restrictions." "Authorization by Congress of such a national highway system, it is believed, would furnish a nucleus for developing on a cooperative federal-state basis a plan to eliminate the undesirable restrictions," the press release says. "Congress could designate this interstate system, with suitable additions and modifications, as a national network of carrier routes on which no less than standard size and weight limitations would prevail."

The "barrier" report also recommends "that a uniform basis of taxation of interstate commercial vehicles be developed and established in each state to replace the present intricate and often unscientific methods of licensing and taxing." The board further believes that manufacturers of commercial vehicles, "already receptive to the idea," should be required by law "to certify the

true design capacity of the vehicles they manufacture, basing their ratings on a uniform formula, and that they should certify rebuilt vehicles on the same basis."

Extending Job Security in Railroad Industry

The report on Railroad Consolidation and Employee Welfare puts forth the idea that job security in the railroad industry should be increased "by extending certain aspects of the employment relationship of the railroad worker from a single company to the entire industry." More specifically, it is recommended that the present employment service of the Railroad Retirement Board "be extended, with the proviso that the functions be transferred to the rail managements and unions at any time they might agree upon and establish their own agency for that purpose." The press release outlines the proposed procedure as follows:

> All managements would apply to the Railroad Retirement Board's employment service when they needed additional employees. The service would respond by sending for each position to be filled the personnel data of a number of properly qualified members of the unemployed pool. This number should not be large, perhaps four, and the credentials should be sent out in the order of the employee's entry into the unemployed pool. Furthermore, the employees should be given choices of as many employers as the employer is given of employees. This means that the employer would not be forced to take the qualified individual who had been longest in the unemployed pool; and, on the other hand, the employee would not be required to accept the first vacancy. In the absence of properly qualified members in the railroad unemployed pool the managements, of course, should be allowed to hire personnel from the outside. Admittance to the pool probably should not be allowed to those who are unemployed by reason of discharge, retirement, or resignation.

The report on the National Traffic Pattern is given one brief paragraph in the press release, which calls it an analysis of "the nation's freight and passenger traffic pattern with special reference to its development between the two wars." It "shows the extent to which each instrumentality is performing the service for which it is inherently the most economical and fit, and points out that the place held by each type of carrier is determined to an important degree by regulatory policies."

General and Specific Traffic Studies

The Carload Traffic Study, 1939, embodies "the analyses thus far made of data taken from 700,000 waybills covering 900,000 shipments," which "are believed to provide the most comprehensive picture yet available of railway traffic flow in relation to the country's resources and industrial pattern." The analyses by mileage blocks present for the various territories data on average rates, weights of shipments, movements of cars, and average costs. The studies of the economics of coal traffic flow and iron ore traffic flow were among six of their kind, but the only two on which separate reports were made. The material collected in all of them, however, "has been used in several of the reports."

The report on Technological Trends in Transportation—Post-War Capital Requirements is dismissed in the press release with a statement of its "two purposes." They are: "(1) To point out and highlight the more important technological developments which concern rail, motor, water, pipe line, and air transportation, and (2) to examine the post-war capital requirements of rail, motor, and water carriers in order to estimate the extent and nature of funds which will be needed for carrier improvement and development immediately following the war." The report on Comparisons of Rail, Motor and Water Carrier Costs is concerned mainly with bringing together the so-called Mississippi Valley studies. "The board," says the press release, "considered the lower Mississippi Valley to be a representative area in which the three forms of transport [rail, truck, and barge] compete actively under conditions which permit general conclusions to be reached concerning the inherent advantages of each type for particular kinds of transportation service." The report does, however, include "considerable data on costs of the three modes of transportation in other parts of the country."

As noted above, the report on Practices and Procedures of Federal Control repeats those recommendations of the economy and fitness report which call for three new federal transportation agencies. According to the press release, it also contains "other recommendations for the coordination and improvement of practices and policies of governmental agencies dealing with transportation." The final report on Federal Restrictions on Motor and Water Carriers recommends "permanent post-war liberalization" of such "restrictions," which include such things as commodity, route, territorial, and return-haul limitations placed in certificates by the I. C. C. The summary report on this subject, reviewed in the *Railway Age* of June 10, page 1125, recommended legislation directing the I. C. C. to suspend the "restrictions" for the duration of the war.

Reports Previously Submitted

The press release concludes with a listing of the board's earlier reports, including the summary report and the final report on the interterritorial rate investigation which the board went outside its statutory assignments to make in response to its December, 1941, commitment to Senator McKellar, Democrat of Tennessee, who got what he wanted by threatening to oppose a then-pending appropriation for the board. These rate reports were reviewed in the *Railway Age* of April 3, 1943, page 664, and in the issue of October 2, 1943, page 517. The other earlier reports were that on Hourly Remuneration Rates in the Transport Industry, reviewed in the *Railway Age* of June 3, page 1084; and that on Rate-Making and Rate-Publishing Procedures, reviewed in the issue of November 27, 1943, page 876.

Thus did B. I. R. bow out, as the *Railway Age* of last March 18 predicted it would—"in something less than a blaze of glory." It functioned for a little more than three years, getting a bad send-off from President Roosevelt and never gathering much prestige; for its "sell-out" to Senator McKellar on the rate report came when it was but a few months old. And a year ago it lost the services of its former chairman, Nelson Lee Smith, who is now a member of the Federal Power Commission.

The Transportation Act of 1940 was enacted on September 18 of that year, but President Roosevelt made no move to appoint members of the board until March, 1941, when he named Mr. Smith, Wayne Coy, former assistant director of the Bureau of the Budget, and Charles West, former Democratic member of Congress from Ohio. The Senate committee on interstate commerce indicated no disposition to act on the nominations, and the President finally withdrew the names of Messrs. Coy and West, substituting Messrs. Webb and Childe. The board finally got organized late in August, 1941. Since Mr. Smith's transfer to the Power Commission, Messrs. Webb and Childe have comprised the board, with the former as chairman.

The act gave the board two years of life from September 18, 1940, authorizing the President to extend its life for two more years by executive order, which he did. It directed it to study the relative economy and fitness

of rail, motor, and water carriers; the impact of taxes on carriers; and public aids to carriers. As noted above, the reports on these three matters got in only on the deadline day, while the extra-curricular study of inter-territorial rates was pushed to a conclusion a year ago. For its work the board received appropriations totaling $1,121,500.

Chairman Webb, who is a former member of the Kentucky Railroad Commission, said on September 19 that he had no future plans except to return to Kentucky for a rest. Mr. Childe said that he would probably return to private practice as a transportation consultant; but he had no definite announcement as to when he would do so, or whether he would establish his practice in Washington or elsewhere. Mr. Childe came to the board from Omaha, Nebr., where he was in private practice as a transportation counsel. For about 10 years he had been chairman of the traffic committee of the Mississippi Valley Association.

Freight-Car Weight

(*Continued from page 467*)

during the October peak, and reached over 400,000 cars at other times during the year. This evidence suggests that the ability to handle the present traffic volumes with the reduced car ownership is the result more of improved operating methods than of car design, i. e., a matter of taking up the slack, rather than increased availability resulting from less required repairs.

The percentage of bad-order freight cars was considerably less in 1920 than in 1940. There was, moreover, a pronounced increase in this figure during the depression period, 1932-1939, indicating that factors other than the design of the cars have dominated this situation. The average cost of repairs per car was $237.58 in 1920 and $54.61 in 1932, from which low point it rose to $115.96 in 1940 and $172.26 in 1942.

Decline in Repair Expenditures

The reduction in freight-car repairs over this period amounted to 49 per cent, and the loss and damage payments declined nearly 70 per cent. How much of this reduction in loss and damage is due to better packing by shippers, and how much can be credited to improved car design it is impossible to say. Much loss and damage results from deterioration of products due to delays en route or improper refrigeration, ventilation, etc., which has nothing to do with the strength of the car. Undoubtedly lading in general is better packed today than 20 years ago, and so are cars stronger today; the service rendered today in point of time in transit is also much better, so that no definite conclusions can be reached on the basis of this reduction in loss and damage charges.

Freight car repairs per car declined between 1920 and 1942 by 27 per cent, but this item was greater in 1942 than for any year since 1923. In other words, eliminating the period of federal guarantee after the last war and the following depression period, repair costs per car were greater in 1942 with the heavier equipment than during the earlier part of the preceding 20-year period when lighter, smaller equipment was in general use. A partial explanation of this increased repair cost per car is contained in the present intensive utilization of equipment as a result of which cars today are covering more miles than previously, so that while the repair costs per car are high the cost per car-mile has been reduced 65 per cent since 1920. It will be noted, however, that the cost per car-mile has increased steadily since 1938. There is a correlation between repair costs and volume of traffic moved which is independent of car design and must be discounted in any attempt to measure the results of new departures in equipment construction.

A Factor in Postwar Competition

In view of the prospective intense competition after the war, every measure that will reduce the cost of moving a unit of cargo, and thereby permit reduction in the charge for the service will need to be invoked. Any measure which will reduce the present proportion of energy expended in hauling dead weight over the road will serve this purpose and thereby improve the railroads' chances in the coming struggle.

Reduction of the tare weight of cars without reducing their average capacity would serve this purpose provided the present average load could be maintained, but this seems doubtful.

The above figures suggest also that a considerable saving in repair costs has resulted from the construction of stronger cars which must be balanced against the loss of efficiency in the application of motive power through the increased dead weight; and any measures which may be taken to reduce the tare weight of cars must also take into consideration the desirability of conserving the strength and ruggedness of the present freight car, with its low repair cost per car-mile.

* * *

British Combine Photo

Australia's Fastest, Most Modern, Streamlined, Air-Conditioned Train—the "Spirit of Progress"—Runs from Melbourne to Albury on the New South Wales Border, with an Average Speed for the 191-Mile Trip of 50 M.P.H.

F. C. C. Listens to Railroads

Reasons for allocating radio channels to railroad service are heard by the Federal Communications Commission

ON May 2, 1944, the Federal Communications Commission ordered that an investigation be undertaken to ascertain facts and develop information concerning the use of radio by the railroads as an aid in the protection of life and property or otherwise.

A hearing was begun on September 13 in the U. S. District Court House, Washington, D. C., before three of the F. C. C. Commissioners: Paul H. Walker, chairman, Norman S. Case, and E. K. Jett. Investigation by the Commission was conducted by and under the direction of Jeremiah Courtney, chief of the administrative section of the Commission's law department, acting as counsel for the Commission.

Senator Harley M. Kilgore addressed the opening session. He said that the country's great technical expansion should be continued after the war, using improvements which have been developed for war purposes. Investigations, he said, indicate that radio will improve the safety and effectiveness of railroad operation and that two-way radio would certainly have obviated certain wrecks on trains in non-signal territory. He added that it would also serve effectively in yards and terminals and be valuable as a means of buttressing flagging. The quality of radio has been greatly developed and full advantage should be taken of the money which has been spent by the government for this purpose. He concluded his statement by praising the railroads for the service they have rendered during the war and said that further development of devices such as radio for train communication must be made under the conditions of friendly competition without repression.

Induction System Advocated

Much of the testimony given during the first three days of the hearing was concerned with the relative merits of the induction or carrier types and space radio systems, involving end-to-end, wayside-to-train and train-to-train communication. Representatives of the Pennsylvania Railroad and the Union Switch & Signal Company stated that in their opinion the induction system, using the rails and wayside wires as carriers, possessed all the requirements of railroad train communication. These statements were substantiated by their explanation that they have a long background of experience and experimentation which has warranted the railroad in contracting for an installation of inductive train telephone on the four-track heavy traffic main line between Harrisburg, Pa., and Pittsburgh, at an estimated cost of more than a million dollars.

A statement released by the railroad states: "After exhaustive study of and experimentation with every known method of train communication over a long period, the Pennsylvania is convinced that its new inductive train telephone system, which is now being applied to main line divisions, is superior to radio for railroad purposes. The Pennsylvania believes that its new train telephone meets all the requirements of a rail communication system, embodies all the advantages of radio, and at the same time, in the public interest, eliminates the necessity for assignment of radio wave lengths from the limited number available, and avoids increasing the congestion of the air. The railroad's new system also provides a solution for certain practical difficulties encountered in adapting radio to rail use."

The principal witness for the Pennsylvania was W. R. Triem, general superintendent of telegraph, and for the Union Switch & Signal Company, Dr. L. O. Grondahl, director of research and engineering.

Testimony opposing the use of induction and carrier type systems stated that they did not permit of a sufficient number of channels to meet all railroad requirements, that all tracks do not have paralleling communication lines, that all telephone, telegraph and power lines paralleling the railroads already used carrier communication circuits, and that because of their limited permissible number they would offer competition to the train communication circuits. It was also claimed that grounding or destruction by storm of the wayside wires would interfere with the continuity of carrier type circuits. R. A. Clark, Communication & Equipment Engineering Company, stated that in his opinion carrier type systems could not fulfill all railroad requirements. This opinion was opposed by Mr. Triem.

At one point in the proceedings Chairman Walker interrupted to remind witnesses and their counsel that the primary purpose of the hearing was to determine what reasons there are for allocating radio wave channels to the railroads in the public interest. Testimony produced much evidence to show the effectiveness of train communication in improving train operation. An improved operating efficiency of 30 per cent was indicated in the testimony given by Albert G. Morrison, general superintendent of stores, at the Kingsbury Arsenal. He stated that after train communication was installed he was able to release three of his ten locomotives and still do more work than before.

Since modern types of radio suitable for use in train communication are so new, and since safety is in most cases a by-product of improved operation, it is difficult at this time to assign definite values to the safety factors involved.

Wave Channel Assignments

Definite requirements for wave channel assignments to the railroads were presented by Committee No. 7 of the Radio Technical Planning Board. These requirements were based on the Chicago territory which is the most difficult location for using train communication and where 33 railroads operate within the area. The report was presented by J. L. Niesse, assistant superintendent of telegraph, New York Central, appearing as chairman of Committee No. 7. The report states that the railroads should have 141 channels to meet all of their train communication requirements; but, in presenting the report, Mr. Niesse explained that for operation throughout the country it would not be necessary for the railroads to have exclusive use of all of these channels and that the railroads stood ready to move up into higher frequency

bands when further technical developments made this possible. An abstract of the report of Committee No. 7 follows:

End-to-End Train Communication

End-to-end service contemplates communication on a train between engine and caboose, whether in motion, standing or parted; communication between the engine or caboose and the conductor, flagman or other employee on the ground, and communication between one train and another train when approaching, passing or departing from one another.

At 157 megacycles the usable range appears to be in the order of 8 to 10 miles, with 6 to 10 watts on the antenna.

To avoid confusion and misunderstanding in train operation it will be necessary in this service to assign one channel to each of the 33 operating railroads in the Chicago district. Band widths of one-tenth of one per cent of the assigned frequencies are requested. This request is based on information supplied the Committee by the manufacturers that under the severe temperature and operating conditions in railroad service it does not appear practicable to utilize narrower band widths. However, at a Steering Committee meeting on September 6, 50 kilocycle band widths were recommended for 116 to 133 megacycles. This recommendation has not been acted upon by Committee No. 7.

It is estimated a range of 5 miles is necessary in order that two trains passing may have sufficient time to communicate with one another before getting out of the usable range of the equipment. Antenna input power is listed as 50 watts or less. It is anticipated that powers considerably smaller than this should ordinarily be satisfactory.

Fixed Point and Train Communication

Yard operation.—Under this classification it is proposed to use radio in directing locomotives and employees in the operation of railroad yards. Test data have indicated clearly that frequencies between 100 to 175 megacycles will be satisfactory and the present request is for channels in this range. It will be feasible to utilize high antenna systems for fixed stations in this service.

The most congested area for the railroads in this classification is Chicago, Ill. There are a total of 122 yards in the Chicago area. It is assumed that some of the smaller yards will not require radio service. Yards generally are long and relatively narrow and directive antenna at the fixed station can be used. In an area as large as the Chicago Terminal District it is estimated that some duplication of frequencies can be made. Taking these various factors into consideration, it has been estimated that the Chicago Terminal switching district can be covered with tolerable interference with 3 channels.

To cover some of the comparatively large yards it is estimated a range of 5 miles will be required. Antenna input power is listed as 50 watts or less. It is anticipated that powers smaller than this will ordinarily be satisfactory.

Terminal Operation.—In most cities, from medium to large size, a considerable amount of terminal industrial or belt switching is performed by the railroads. The switching and belt railroads may have 300 or over 600 miles of track, but roughly follow a circular pattern around the area and generally in no case extend over 35 miles from a fixed point. The radio service involved would therefore be from a fixed station or stations covering the switching area having an effective operating range of 35 miles. Since all the railroads in a terminal area may operate their engines over other railroads, belt and switching tracks in interchanging cars and industrial service, the problem involves covering the entire area for the use of each railroad utilizing the service. The Committee feels that frequencies in the 100 to 175 megacycle band can be utilized for this service. It believes, however, that the lower end of this band would be highly preferable.

Present test data indicate a maximum usable range of the order of 10 miles at 156 megacycles which, it will be noted, is considerably less than that required. The Committee feels, however, that with progress and developments that are being made and will be made, a considerably greater range can later be obtained. Taking this into consideration, as well as the fact that the interference problem in the 30 to 40 megacycle band may be particularly severe, it has requested the higher frequencies. It further believes that in extreme cases where the frequencies requested will not cover the entire area satisfactorily from one transmitter, two or even three remotely controlled transmitters could be used.

In Chicago, 33 railroads operate 320 locomotives in interchange, transfer and delivery service. Of these 320 locomotives, 169 are the maximum number working at one time. The problem of determining the number of frequencies for this service is a difficult one. First is the matter of unknown volume of communication traffic. The problem of determining the number of calls that would be handled by radio is one involving considerable study. Due to the pressure of time, the Committee has been unable to make an investigation. Consideration has also been given to the use of a number of common transmitters, particularly by a group of certain roads with relatively small terminal operations. Due to the complexity of the problem, however, and the large number of factors involved, the time available has not permitted a study of this type. The Committee, has, therefore, been unable to arrive at a better estimate than one frequency for each railroad system.

It is proposed to keep power on the antenna below 50 watts, but because of the large area to be covered, the Committee believes that permission to use higher power should be included. To cover the Chicago Terminal switching district it is estimated that a maximum range with single frequency operation will be 35 miles.

This service contemplates communication from a dispatcher or other fixed point such as a tower or station to a moving train. This is an entirely new service and is so intimately tied in with

F. C. C. Commissioners at the Railroad Train Communication Hearing—Left to right: Norman S. Case, Paul H. Walker, Chairman, and E. K. Jett

train operation that the uses and methods of operation will have to be developed in practice. It is proposed to use the same frequencies as used for end-to-end communication for communication between the mobile equipment on the train and the fixed station transmitting directly to the mobile equipment.

To connect the dispatcher or other remote point to the fixed transmitter at a station, tower or other point along the railroad, a radio relay system is proposed. For this service frequencies in the range of 1,000 megacycles have been requested on the understanding that these frequencies would most likely be made available for relaying service. If other frequencies are made available either in the 2,000, 3,000 or 4,000 megacycle bands the railroads would be glad to utilize whatever bands are eventually allocated.

Eighteen channels have been requested for the relay system in order to provide a maximum of 3 systems of two-way communications. It is proposed to use 6 channels for each separate relay system. Two channels for use between: for example, relay points *a* and *b*—2 between *b* and *c*, 2 between *c* and *d* and then re-use channels *a* and *b* between *d* and *e*, etc. The three systems were determined on the basis of three railroads closely paralleling one another in a given territory and utilizing this type of service. It is realized that there are and will be cases where more than three railroads may parallel and possibly be within interfering range of one another. It is estimated, however, that with highly directional antenna systems and in most cases with a geographical separation of the relay points beyond the parallel, it would probably be possible to work out a non-interfering system.

This service, due to its nature, must provide a break-in feature and to cover this vital requirement 6 additional channels are needed in the 100 to 175 megacycle band of the same band width and antenna power input as those requested for end-to-end communication.

Based on information received from the manufacturers, it appears that at the present state of the art the following band widths will be necessary: .05 per cent for stability; .02 per cent for calibration accuracy plus 2 megacycles for modulation. In addition, a small guard band between the frequencies of an estimated total band width of six-tenths megacycle, which indicates a total band width of somewhere around 4 megacycles for this service. This is based on a frequency of 1,000 megacycles and if higher frequencies are allocated the Committee would suggest the following: In the 2,000 megacycle band, a channel width of 9 megacycles; in the 3,000 to 4,000 megacycle band, channel widths of 13 megacycles.

The Committee believes that future developments will improve both the stability and calibration accuracy and permit channels to be made narrower, but at the present time it can make no estimate of what these may be.

Antenna power inputs of 50 watts and under, and 50 to 500 watts have been requested. It is probable that no more than 50 watts will be required. However, because of the range to be covered and the unknown factors involved, the Committee felt it desirable to request the higher power with the understanding that should it not be needed, it would not be utilized.

To keep the cost of the relay system within practicable limits, it is believed that fixed stations should be in an order of around 30 miles apart which would necessitate a range for the transmitting equipment between the relay point and train of 15 miles.

Emergency and Miscellaneous Applications

For the use of radio during emergencies on work equipment such as derricks, snow plows, fire fighting equipment, etc., it is proposed to have the work equipment supplied with a radio transmitter and receiver and a portable set to be unloaded at the point where the nearest wire line is interrupted, the radio link to consist only of the interrupted portion of the wire line.

Frequencies in the 2 to 3 megacycle band are requested because of the estimated range of 50 miles. If suitable higher frequencies will give equivalent service the railroads have no objection to utilizing them. Two channels of 8 kilocycle band width are requested for this service to provide one two-way telephone circuit. Antenna input powers of 50 or 50 to 500 watts are requested. Considering major interruptions, such as floods and extensive storm damage, it is estimated a range of 50 miles should be available.

The Committee contemplates the installation of radio equipments for telephone, telegraph and multiplex service in order to bridge gaps in telegraph and telephone wire lines during major prostrations, such as floods, storm damage, etc. Frequencies in the 2 to 3 megacycle band are also desired for this service.

For supervision and control of train operation from a fixed point the Committee contemplates the use of radio for remotely controlling centralized traffic control systems. To extend the CTC to additional lengths of track from the control point wire lines or carrier systems are used. In event of failure of the wire lines, it is impossible to establish function between the control point and the control territory with the result that not only is train operation most severely affected in the control section but also, as a result, in the adjoining sections. Because of the extreme desirability of maintaining continuity of service the Committee has recommended the use of radio for handling the remotely controlled sections. This would be done by means of a radio relay system and from a technical standpoint the arrangement would be substantially identical to the system suggested for communication between a dispatcher's office and a train.

Similarly, it is proposed to use radio in electrified territories for a remote control of power circuits and in rapidly rearranging supply conditions in event of failures.

Radar for Inland Water Craft

Use of radar is considered for inland water craft in railroad service, particularly under fog conditions. At certain of the large seaboard ports, railroads operate extensive fleets of tug boats in connection with their car ferry and lighterage service. During severe fog conditions, which are more or less prevalent in these locations, it is very difficult at times to navigate these boats and their prompt dispatch and arrival at various terminals is most essential to continuous and fast movement of freight. The use of radar is suggested in order to avoid collisions in this class of service.

Due to restrictions on information because of the war, the Committee is unable to state frequencies, number of channels, band widths or other pertinent data concerning this service and will rely on the utilization of whatever frequencies are assigned to radar for similar commercial application.

For ship-to-shore service, the Committee contemplates the use of radio for dispatching tug boats in car ferrying service. A similar service is now provided by commercial telephone companies on a fee per call basis at various harbors. The railroads feel that for operational and economical reasons they may wish to establish their own service.

Warning Track Forces

A device is contemplated for warning track maintenance forces and others, whose duties require them to work on or in very close proximity to the tracks during the approach of trains. It is proposed to establish a radio transmitting device located a suitable distance each way from the point where these employees are working. This transmitter will operate on a closed circuit principle and be actuated by the passage of a train and cause a warning signal to be sounded at the location where the men are working. Frequencies in the 100 to 175 megacycle band are requested for this service.

It is estimated three channels will be necessary to take care of situations involving paralleling railroads. Because of the highly essential need for clear channels in this service, the channels cannot be shared with other services. Antenna input powers of less than 50 watts will be required. A service range of approximately 2 miles will be required.

For communication between installation and maintenance forces, it is proposed to provide radio communication for these employees in their work of testing, maintaining and installing equipment, where there are no wayside communication circuits, as it is believed a great deal of time can be saved. Frequencies in the range 100 to 175 megacycles are recommended because of the range involved and the fact that in many cases these equipments will be utilized in terrain involving hills, mountains, heavy curves, cuts, etc. One channel it is believed will take care of the situation. Power of 50 watts or less is indicated. A maximum service range of around 5 miles is required.

Amplitude vs. Wide Band Modulation

The Committee gave consideration to the use of amplitude vs. wide band modulation, and it believes that this is a matter that should be determined by adequate tests in the field. The attention of the Commission was called to the fact that due to the pressure of time and restrictions placed upon equipment by the war situa-

tion, it has been unable to secure data covering experimentation in the use of higher frequencies of the order of 300 megacycles, 500 megacycles, 1,000 megacycles, and 3,000 megacycles in its various suggested services. It has been advised that tests in these frequencies are under way and it feels that it is most unfortunate that results are not available to present to the Commission at this time.

Both Space Radio and Carrier

Following presentation of the report of Radio Technical Planning Board Committee No. 7, a number of railroads and manufacturers' witnesses described their experiences and made recommendations.

C. O. Ellis, superintendent of communications, Chicago, Rock Island & Pacific, described experiments conducted by his railroad which were designed to develop communications for terminal operations, front-to-rear of freight trains, train-to-wayside points and the emergency bridging of gaps in wire line circuits.

Ernest A. Dahl, electronics engineer, Chicago, Rock Island & Pacific, said that his railroad would like to have allocations between the 250 and 300 megacycle band, as follows: 250—260 for passenger train operations; 260—270 for freight train operations, 270—280 for terminal operations; 280—290 for yard operations, and 290—300 for emergency use and warning devices. He would like to use 175 kilocycles F. M. carrier for train-to-wayside communication. He reported good results at 157 megacycles but said that with 2,000 to 3,000 megacycles, fading was very bad when the train was in motion.

T. P. Brewster, superintendent of telegraph, Atchison, Topeka & Santa Fe, presented a report on experiments made by his railroad and stated that the Santa Fe's needs would be two channels for end-to-end communication; two for yard engines to central stations; eight for train-to-wayside; ten for repeater stations; two for work equipment; two for bridging line failures; one for harbor craft; two for warning of approaching trains, and two for communication between maintenance forces.

W. A. Jackson, general superintendent of telegraph and telephone, New York Central, presented detailed testimony covering experiments made by his railroad and stated that in his opinion both space radio and carrier systems have potentialities for railroad application.

A. S. Hunt, general superintendent of communications, Baltimore & Ohio, outlined his experience with train communication systems. He said that radio, if frequencies are available and if the sets stand up in service as well as they have in test applications, has a definite place in railroad operating communications. His testimony was supported by a technical report prepared by J. H. Wallis, communications engineer, Baltimore & Ohio.

W. W. Pulham, superintendent of communications, Denver & Rio Grande Western, described experimental applications of radio on his railroad and said that results obtained clearly indicate that radio intra-train communication can play an important part in supplementing existing communication and signaling facilities.

A fund of technical information including cost data was supplied by representatives of the Bendix Aviation Corporation, Westinghouse Electric & Mfg. Company and the General Electric Company.

Army Railroader Produces Roller Skating Show

From the columns of the "Yankee Boomer," newspaper for the personnel of the Military Railway Service, comes the account of the ex-P. R. R. mail clerk and one-time novice free-style roller skating champion of Ohio, who organized what was said to be the "most unusual armed forces show in the entire Mediterranean theater." In assembling his talent, Pvt. Martin C. Boyter of the 713th Railway Operating Battalion is reported to have pursued his love for skating with a single-mindedness of purpose. He first ran a "box" in the Boomer:

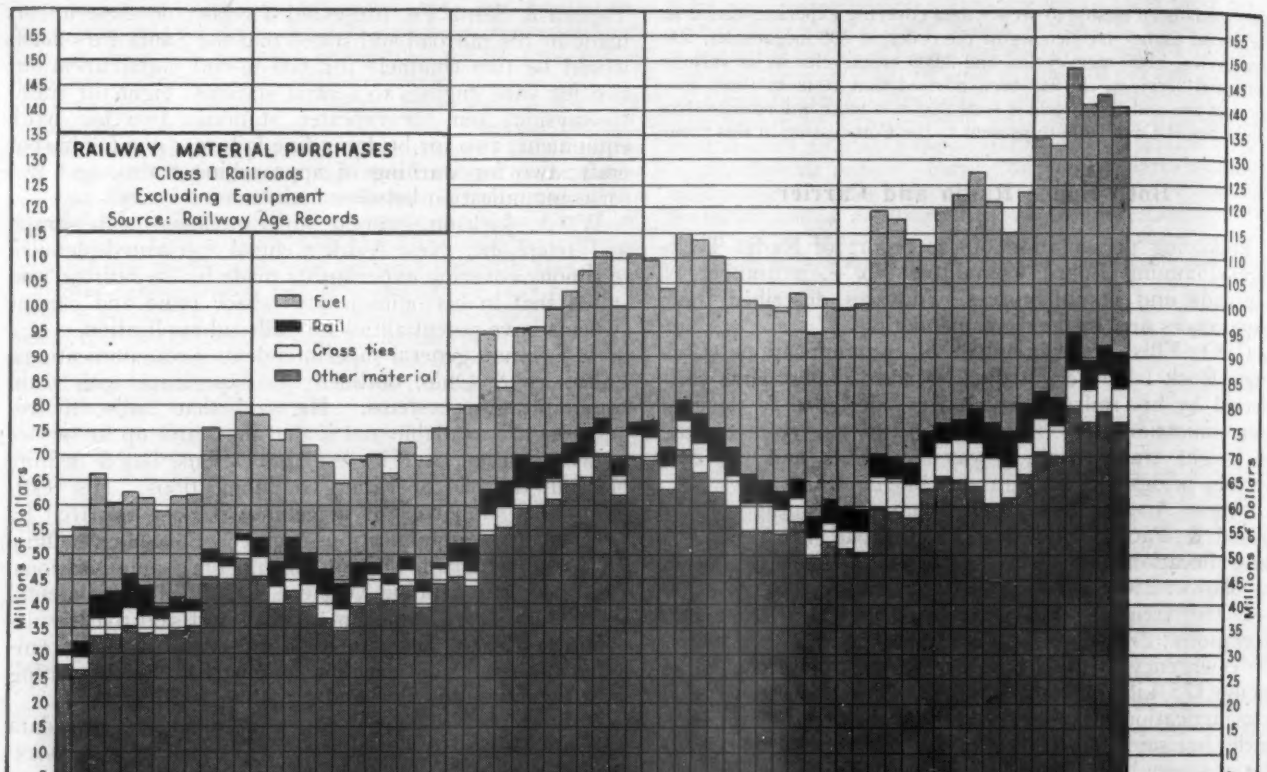
"Fancy skaters, how would YOU like to waltz with Franca or Anna? Private Boyter is looking for GI roller-skating talent for his show. If you're good, get in touch with either the BOOMER editor or Private Boyter." [Aforementioned Franca and Anna appear in the accompanying picture, which originally had received a prominent spot in the Boomer].

Feminine talent for the revue was drawn from a list of Italian professionals. One Signorina Crimaldi, described by the Boomer as a "luscious little blonde," was for three years Italian free-style and figure skating champion, appearing in nearly every country in Europe. Other girls were discovered, and at least one Signal Corps soldier, Pvt. Gerald Reyman, attached himself to the troops by "shadowing" Pvt. Boyter through the streets when he observed the latter on his way to a rehearsal rink, skates in hand.

Time for rehearsals, however, proved something of a problem to Private Boyter, for as he said, "I'm doing a job over here like any other M. R. S. soldier."

Photo by Lidikay

Pvt. Boyter Pursuing His Hobby—Rollerskating—in Italy



Purchases Top $842 Millions

Railways spend 34 per cent more for maintenance materials, 36 per cent more for rail, and 22 per cent more for crossties in the first six months

PURCHASES of fuel, materials and supplies by Class I railroads in the United States during the first half of 1944, increased 27 per cent and aggregated $842,735,000 compared with $663,991,000 during the first six months of 1943, according to *Railway Age* estimates that are based on special reports received from the carriers. Although recent returns indicate a slight easing in total purchases, the total for the first half

Railway Purchases for First Six Months, 1944—Class I Roads

	Miscellaneous Materials and Supplies—In Thousands					Rails—In Thousands				
	1944*	1943	1942	1941	1940	1944*	1943	1942	1941	1940
Jan.	$70,938	$51,147	$69,060	$45,457	$45,593	$5,619	$4,471	$3,075	$3,464	$3,529
Feb.	69,861	50,531	63,216	43,467	39,939	5,481	4,033	3,817	5,297	4,815
Mar.	81,086	59,381	71,172	54,070	42,655	6,737	4,385	3,770	5,168	6,042
Apr.	76,866	58,806	66,479	55,444	39,407	5,402	3,886	5,831	4,857	6,470
May	79,150	57,513	62,880	59,492	37,122	5,413	4,274	6,641	6,196	5,019
June	76,982	63,240	59,889	59,682	34,510	5,789	4,260	5,833	4,868	5,022
First Half ...	454,883	340,618	392,696	317,612	239,226	34,441	25,309	28,967	29,850	30,897
	Crossties—In Thousands					Total Materials & Supplies (Less Fuel) In Thousands				
Jan.	7,056	4,118	4,895	3,472	4,128	83,613	59,736	77,030	52,393	53,250
Feb.	6,831	4,622	4,837	3,514	3,928	82,173	59,186	71,870	52,278	48,682
Mar.	7,541	6,612	6,130	4,087	4,635	95,364	70,378	81,072	63,325	53,332
Apr.	6,902	6,758	6,173	4,365	4,585	89,170	69,450	78,483	64,666	50,462
May	7,581	6,894	6,186	4,369	4,789	92,144	68,681	75,707	70,057	46,930
June	7,915	6,964	6,168	4,071	4,645	90,686	74,464	71,890	68,621	44,177
First Half ...	43,826	35,968	34,389	23,878	26,710	533,150	401,895	456,052	371,340	296,833
	Fuel—In Thousands					Total Material, Supplies & Fuel In Thousands				
Jan.	50,901	39,882	32,803	27,261	24,977					
Feb.	50,596	41,542	31,945	27,901	24,219	134,514	99,618	109,833	79,654	78,227
Mar.	53,869	49,296	33,976	31,121	21,880	132,769	100,728	103,815	80,179	72,901
Apr.	52,228	48,368	35,179	19,203	21,575	149,233	119,674	115,048	94,446	75,212
May	51,599	44,990	34,651	25,550	21,862	141,398	117,818	113,662	83,869	72,037
June	50,392	38,018	35,239	27,338	20,160	143,743	113,671	110,358	95,607	68,782
						141,078	112,482	107,129	95,959	64,337
First Half ...	309,585	262,096	203,793	158,374	134,663	842,735	663,991	659,845	529,714	431,496

*Subject to Revision

exceeded that for the same period of 1942 by 28 per cent; it was almost 60 per cent greater than for the first six months of 1941 and 96 per cent greater than for the first half of 1940.

The railroads spent approximately 33 per cent more for materials and supplies received from manufacturers, excluding fuel, during the first six months of this year than during the same period in 1943. Total purchases, including miscellaneous materials and supplies for the maintenance of locomotives, cars, roadway and structures, as well as for rails and crossties, amounted to $533,150,000 and represented an increase of 33 per cent over the first half of 1943, 17 per cent greater than for the same period in 1942, 44 per cent more than in 1941, and 80 per cent greater than 1940.

$2,930,000 Average Daily Purchases

The daily average expenditure by Class I roads, for manufactured materials, during the first six months of 1944 amounted to $2,930,000; which is $770,000 a day *more* than the average expenditure for the same period last year, and $1,290,000 a day more than pre-war 1940.

Purchases of miscellaneous materials and supplies used for the maintenance of cars, locomotives, roadway and structures, *but excluding* rails, crossties and fuel, amounted to $454,883,000 for the first half of 1944, an increase of 34 per cent over last year's $340,618,000; 16 per cent greater than 1942's $392,696,000; 43 per cent more than 1941's $317,612,000, and 90 per cent more than the $239,226,000 that was spent for similar materials and supplies in the first half of 1940.

The expenditure of $34,441,000 for rails during the first half of this year was 36 per cent more than in the first six months of 1943 and more than for any similar period during the last five years. The roads received 19 per cent more rails than during the first half of 1942, 15 per cent more than in the first six months of 1941 and 11 per cent more than the same period of the pre-war year, 1940.

Expenditures for crossties amounted to $43,826,000 during the first six months of this year and were greater than for any similar period since 1930. In fact, crosstie expenditures for the first half of 1944 exceeded the *annual* expenditures for this purpose for each year from 1931 to 1939 inclusive, with the single exception of 1937 when the annual total amounted to $58,361,000. By comparison, crosstie expenditures for the first half of 1944 exceeded those of respective periods by 22 per cent in 1943, 27 per cent in 1942, 84 per cent in 1941 and 64 per cent in 1940.

(*Continued on page 483*)

Railway Purchases of Miscellaneous Materials and Supplies for Maintenance of Cars, Locomotives, Roadway and Structures (Excluding Rails, Ties, Fuel) for First Six Months

	Mileage	1944	1943	% Ch'ge
Akron, Canton & Youngstown	171	$151,059	$149,165	+1
Alton & Southern	32	170,310	131,155	+30
Ann Arbor	294	274,367	190,891	+44
Atchison, Topeka & Santa Fe	13,147	35,958,241	13,020,533	+176
Atlanta, Birmingham & Coast	639	322,410	285,320	+13
Atlantic Coast Line	4,966	6,731,026	5,913,198	+14
Baltimore & Ohio	6,382	19,516,698	15,409,649	+27
Bangor & Aroostook	597	458,821	404,046	+14
Boston & Maine	1,825	3,955,152	3,229,769	+22
Cambria & Indiana	61	76,442	45,139	+69
Central of Georgia	1,816	1,845,574	1,083,570	+70
Central of New Jersey	692	2,715,717	2,529,021	+7
Central Vermont	422	381,252	333,778	+14
Charleston & West. Carolina	343	231,005	197,269	+17
Chesapeake & Ohio	3,073	8,565,886	5,706,058	+50
Chicago & Eastern Illinois	912	1,756,092	1,147,876	+53
Chicago & Illinois Midland	131	312,575	208,398	+50
Chicago & North Western	8,100	9,284,136	6,125,435	+52
Chicago, Indianapolis & Louis.	520	464,450	477,917	−3
Chicago, Milwaukee, St. P. & P.	10,761	11,033,271	5,715,560	+93
Chicago, Rock Island & Pacific	7,751	8,635,343	6,577,681	+31
Chicago, St. Paul, Minn. & O.	1,622	1,461,177	976,582	+50
Colorado & Southern	748	1,284,557	966,179	+33
Columbus & Greenville	168	83,663	70,035	+19
Delaware & Hudson	848	2,283,144	2,214,517	+3
Detroit & Mackinac	244	36,067	49,159	−27
Detroit & Toledo Shore Line	50	73,128	68,755	+6
Detroit, Toledo & Ironton	464	274,058	322,742	−15
Duluth, Missabe & Iron Range	544	1,026,609	849,968	+21
Duluth, South Shore & Atlantic	535	144,274	135,928	+6
Elgin, Joliet & Eastern	392	1,203,544	1,250,694	−4
Erie	2,418	5,880,153	5,364,847	+10
Florida East Coast	682	1,371,437	995,678	+38
Fort Worth & Denver City	804	961,463	732,744	+31
Great Northern	8,125	9,882,961	7,451,855	+33
Gulf, Mobile & Ohio	1,972	1,297,625	1,091,228	+19
Illinois Central	6,607	14,214,925	13,497,584	+5
Kansas City Terminal	170	454,499	332,163	+37
Lake Superior & Ishpeming	156	92,943	72,624	+28
Lehigh & Hudson River	96	154,797	127,406	+21
Lehigh & New England	190	180,805	117,958	+53
Lehigh Valley	1,260	4,338,195	2,892,492	+50
Louisiana & Arkansas	852	562,868	757,902	−26
Louisville & Nashville	4,745	7,307,786	6,171,005	+18
Maine Central	991	1,027,427	706,337	+45
Minneapolis, St. Paul & S. S. M.	4,277	2,336,751	1,981,842	+18
Missouri & Arkansas	365	69,597	94,931	−27
Missouri-Kansas-Texas	3,293	3,587,765	4,256,040	−16
Monongahela	172	138,221	85,964	+61
Montour	51	113,089	84,617	+34
Nashville, Chattanooga & St. Louis	1,085	2,663,507	1,717,103	+55
New York Central	10,766	38,561,972	29,865,228	+29
New York, Chicago & St. Louis	1,688	3,461,156	2,623,587	+32
New York, New Haven & Hartford	1,838	7,928,894	6,113,118	+30
New York, Ontario & Western	546	375,118	372,088	+1
Northern Pacific	6,868	7,571,934	5,657,936	+34
Northwestern Pacific	331	68,701	66,182	+4
Pennsylvania-L. I.	9,813	45,579,223	38,122,153	+20
Pennsylvania-R. S. L.	405	199,425	131,937	+51
Pere Marquette	1,979	2,354,964	1,593,317	+48
Pittsburg, Shawmut & Northern	190	41,908	42,612	−2
Pittsburgh & West Virginia	136	344,064	299,582	+15
Reading	1,418	7,582,869	5,003,545	+52
Richmond, Fredericksb'g & Potomac	118	1,408,422	1,253,454	+12
Rutland	407	219,078	140,863	+55
St. Louis-San Francisco	4,946	5,643,866	4,668,258	+21
Seaboard	4,178	6,347,932	5,960,575	+6
Southern	7,700	15,568,684	14,268,676	+9
Southern Pacific-Pacific Lines	8,309	24,270,154	14,925,938	+63
Spokane, Portland & Seattle	947	757,864	682,974	+11
Tennessee Central	286	298,290	345,532	−14
Terminal R. R. of St. Louis	463	828,310	818,657	+1
Texas & New Orleans	4,341	4,327,169	3,465,014	+25
Texas & Pacific	1,903	4,027,823	3,381,938	+19
Union Pacific	9,817	23,903,135	17,731,689	+35
Virginian	657	2,552,378	1,177,053	+117
Wabash	2,381	4,540,201	3,122,870	+45
Western Maryland	842	1,637,362	1,470,500	+11
Western Pacific	1,195	1,999,500	1,543,596	+29
Wheeling & Lake Erie	507	943,336	784,615	+20

Materials and Supplies in Stock—Class I Railroads

	Fuel (000)	Rail-New and S. H. (000)	Cross Ties (000)	Stock Stores (000)	Scrap (000)	Total (000)
			Year 1943			
Jan. 1	$47,612	$18,131	$52,977	$375,376	$9,805	$503,901
Feb. 1	43,654	19,583	56,587	374,097	10,408	504,329
Mar. 1	45,374	20,651	58,999	371,835	10,385	507,244
Apr. 1	50,330	20,753	62,280	371,332	10,517	515,212
May 1	55,627	19,206	61,016	373,565	10,105	519,519
June 1	58,172	19,424	60,479	370,995	10,167	519,237
July 1	55,595	20,811	56,863	373,205	10,267	516,741
Aug. 1	58,216	19,035	57,536	376,295	9,258	520,340
Sep. 1	61,204	19,558	59,185	376,180	8,607	524,734
Oct. 1	61,925	19,764	61,665	378,022	8,170	529,546
Nov. 1	58,769	19,067	62,809	376,825	11,392	528,862
Dec. 1	52,007	21,631	64,368	379,962	8,284	526,252
			Year 1944*			
Jan. 1	50.221	22,342	67,964	382,566	9,628	532,721
Feb. 1	49,056	24,331	72,039	387,899	9,937	543,262
Mar. 1	49,749	25,199	76,254	393,892	9,925	555,019
Apr. 1	49,938	26,923	81,525	400,722	10,334	569,442
May 1	51,320	23,081	80,463	410,114	10,319	575,297
June 1	56,885	22,637	79,004	413,410	10,346	582,282
July 1	62,858	22,766	76,946	416,430	9,622	588,622

*Subject to Revision

War Curbs Wood Preservation

Recessions in all but one classification were result of government restrictions on civilian use of forest products and shortage of manpower in cutting areas

RESTRAINTS imposed through government restrictions on civilian use of forest products, to insure that critical military demands and other requirements created by the war would be met, and hampered still further by an acute shortage of manpower in the cutting areas, made it impossible for the wood-preserving industry to hold, in 1943, the gains that had been made so consistently in recent years. For this reason, during the year, there was a material decrease in the amount of wood given preservative treatment. That this decrease was general is indicated by the fact that it was not confined to any particular classification, but occurred in all but one of the eight classifications into which treated wood has been divided, and the increase in this classification was too small to offset the decrease that occurred in each of the other seven classifications.

Still Chief Consumer of Treated Wood

During 1943, a total of 261,138,980 cu. ft. of wood was given preservative treatment, this being 51,795,641 cu. ft. less than the 312,934,621 cu. ft. that were treated in 1942, representing a reduction of 16.55 per cent, according to figures compiled by R. K. Helphenstine, Jr., Forest Service, United States Department of Agriculture, in co-operation with the American Wood-Preservers' Association.

However, despite this rather large decrease, the total amount of wood treated in 1943 has been exceeded only 4 times since 1930 and only 11 times during the 35 years that these statistics have been compiled.

As in all previous years since the inception of the wood-preserving industry, the railways in 1943 maintained their position as the principal consumer of treated wood. Previous to 1939 this position had been assured by the fact that crossties alone constituted more than 50 per cent of the total volume of timber treated each year, and only the railways use ties. However, from 1939 to 1941 crossties fell below 50 per cent of the total volume of wood treated, although when switch ties and other materials, such as piles, poles, posts, structural timbers, lumber and numerous miscellaneous items, were added, the total consumption by the railways still approximated two-thirds of the total volume of wood treated each year. In 1942 ties and switch ties again aggregated 56.3 per cent of the total. In 1943, the ratio of ties to all wood treated rose to 55.4 per cent, while crossties and switch ties combined represented 59.8 per cent and the railways consumed considerably more than two-thirds of all of the wood given preservative treatment.

Of the total volume of wood treated, crossties accounted for 144,687,201 cu. ft., this being a decrease of 17,838,939 cu. ft. from the 162,526,140 cu. ft. treated during the previous year. Numerically, a total of 48,229,067 crossties was given preservative treatment in 1943, a decrease of 5,946,313. However, except for 1942, in which year many ties were treated for the construction of tracks to serve war industries, training camps and other military facilities, this was the largest number treated in any year since 1931.

As in 1942, oak ties ranked first in number with 17,285,803, or 35.8 per cent of the total. Southern pine continued in second place with 11,155,700 ties, or 23.1 per cent of the total. Douglas fir remained in third place with 5,355,760 crossties, representing 11.1 per cent of the total ties treated during the year; and gum ties again ranked fourth with 4,604,653, or 9.5 per cent. Ties of other woods given preservative treatment, including lodgepole pine, maple, tamarack, beech, ponderosa pine, birch, hemlock and elm, in the order given, aggregated 16.81 per cent of the total, while 1,716,803 crossties, or 3.56 per cent of the total, of woods other than those mentioned, were given preservative treatment.

Of the total number of crossties treated during the year, 31,281,287, or 64.86 per cent, were impregnated with straight creosote or solutions of creosote and coal tar; 16,411,867, or 34.03 per cent, were treated with mixtures of creosote and petroleum; and 497,174 ties, or 1.04 per cent, were treated with either zinc chloride or chromated zinc chloride; while all other preservatives accounted for only 38,651 ties, or 0.07 per cent of the total number of ties given preservative treatment during the year. All of these crossties were treated by pressure processes.

During the year, 29,379,391 crossties, or 60.9 per cent of the total, were adzed and bored prior to treatment; 603,146, or 1.3 per cent, were adzed but not bored; 3,112,848, or 6.5 per cent, were bored but not adzed; and

Wood Preservation 1909-1943

Together with Consumption of Creosote and Zinc Chloride

Year	Total material treated, cu. ft.	Number crossties treated	Creosote used, gal.	Zinc chloride used, lb.*
1909	75,946,419	20,693,012	51,426,212	16,215,107
1910	100,074,144	26,155,677	63,266,271	16,802,532
1911	111,524,563	28,394,140	73,027,335	16,359,497
1912	125,931,056	32,394,336	83,666,490	20,751,711
1913	153,613,088	40,260,416	108,373,359	26,466,803
1914	159,582,639	43,846,987	88,764,050	27,212,259
1915	140,858,963	37,085,585	84,065,005	33,269,604
1916	150,522,982	37,469,368	96,079,844	26,746,577
1917	137,338,586	33,459,470	83,121,556	26,444,689
1918	122,612,890	30,609,209	56,834,248	31,101,111
1919	146,060,994	37,567,927	67,968,839	43,483,134
1920	173,309,505	44,987,532	70,606,419	49,717,929
1921	201,643,228	55,383,515	77,574,032	51,375,300
1922	166,620,347	41,316,474	87,736,071	29,868,639
1923	224,375,468	53,610,175	128,988,237	28,830,817
1924	268,583,235	62,632,710	158,519,810	33,208,675
1925	274,474,539	62,563,911	169,723,077	26,378,658
1926	289,322,079	62,654,538	188,274,743	24,777,020
1927	345,685,804	74,231,840	221,167,895	22,162,718
1928	335,920,379	70,114,405	222,825,927	23,524,340
1929	362,009,047	71,023,103	226,374,227	19,848,813
1930	332,318,577	63,267,107	213,904,421	13,921,894
1931	233,334,303	48,611,164	155,437,247	10,323,443
1932	157,418,589	35,045,483	105,671,264	7,669,126
1933	125,955,828	22,696,565	85,180,709	4,991,792
1934	155,105,723	28,459,587	119,049,604	3,222,721
1935	179,438,970	34,503,147	124,747,743	4,080,887
1936	222,463,994	37,952,129	154,712,999	4,127,886
1937	265,794,186	44,803,239	183,574,581	4,833,935
1938	244,221,442	44,598,678	166,183,891	4,829,590
1939	245,219,878	35,748,845	163,864,259	4,522,070
1940	265,473,149	42,666,598	174,625,305	5,180,896
1941	319,164,422	47,664,019	215,467,780	5,786,424
1942	312,934,621	54,175,380	216,347,768	5,051,263
1943	261,138,980	48,229,067	177,786,315	3,122,302

* Includes chromated zinc chloride.

Treatment of Miscellaneous Material (Ft. b. m.)

	1943	1942	1941	1940
Lumber	270,525,549	287,191,977	281,006,886	234,133,962
Fence posts	21,255,494	37,401,538	28,061,805	17,926,013
Tie plugs	2,146,370	1,694,468	2,222,766	2,581,215
Crossing plank ...	none reported	none reported	1,360,584	724,506
Car lumber	159,792	272,103	220,668	none reported

15,133,682, or 31.3 per cent were neither bored nor adzed.

The quantity of switch ties given preservative treatment in 1943 amounted to 138,998,919 ft. b. m., a decrease of 28,378,697 ft. b. m., compared with the quantity treated in 1942. In this classification also, oak ranked first with 70,682,005 ft. b. m., or 50.8 per cent of the total; southern pine held second place with 20,318,715 ft. b. m., or 14.6 per cent of the total; while Douglas fir was in third place with 15,255,619 ft. b. m., or 11 per cent; and gum, in fourth place, accounted for 12,364,784 ft. b. m., or 8.9 per cent of the total. The remaining 14.7 per cent included maple, beech, tamarack, birch, elm, lodgepole pine, hemlock and a few miscellaneous species.

Piles and Poles Drop Sharply

Making a complete reversal of the continued large gains made each year since 1938, piles showed a decrease of 11,589,188 lin. ft., or 27.7 per cent from the 42,179,210 lin. ft. treated in 1942, to 30,590,022 lin. ft. in 1943. As in previous years, southern pine stood well ahead of other species, with 18,653,646 lin. ft., or 61 per cent of the total; Douglas fir ranked second with 11,492,272 lin. ft., or 37.5 per cent. The remaining 1.5 per cent was made up of oak, Norway pine, gum, northern white pine, lodgepole pine and a few miscellaneous species. All but 160,595 lin. ft. of the piles treated during the year were impregnated with creosote, solutions of creosote and coal tar or mixtures of creosote and petroleum, and all but 19,503 lin. ft. were treated by pressure processes.

Poles also recorded a large decrease, from 2,875,349 in 1942 to 2,028,224 in 1943, a reduction of 847,125 poles, or 29.5 per cent. Of the total number of poles treated, 1,361,911, or 67.1 per cent, were of southern pine; 479,618, or 23.6 per cent, were of western red cedar, and 123,443, or 6.9 per cent, were of northern white pine. The remaining 63,252 poles, or 2.4 per cent, consisted of Douglas fir, lodgepole pine and a few miscellaneous woods. Most of the poles given preservative treatment were impregnated with creosote, and of the total number, 1,421,295 were given pressure treatment and 606,929 were treated by the non-pressure (open tank) process.

In 1943 the wood-preserving industry consumed 177,786,315 gal. of creosote, compared with 216,347,768 gal. in 1942, a decrease of 38,561,453 gal., or 13.2 per cent. It is of interest that, despite this large reduction, the amount of creosote consumed in 1943 has been exceeded only three times since 1930 and only eight times during the 35 years that these statistics have been compiled.

Mixtures of creosote and petroleum in 1943 consumed 28,439,733 gal. of petroleum, compared with 31,386,909 gal. in 1942, a decrease of 2,947,176 gal. This volume of petroleum was used in the preparation of 53,007,913 gal. of such mixtures, compared with 69,264,285 gal. in 1942, a decrease of 16,256,372 gal.

Consumption of both zinc chloride and chromated zinc chloride decreased, the consumption of the former being 1,014,746 lb., or 48,754 lb. less than in 1942, while the decrease in the latter was 1,880,207 lb., from 3,987,763 lb. in 1942 to 2,107,556 lb. in 1943. Included in the foregoing figures are 5,242 lb. of zinc chloride and 170,567 lb. of chromated zinc chloride that were used in fire-retardant treatments.

The consumption of Wolman salts fell from 1,307,830 lb. in 1942 to 769,316 lb. in 1943, a decrease of 538,514 lb. Likewise, the consumption of zinc-meta-arsenite was reduced from 239,786 lb. in 1942 to 53,516 lb. in 1943, a decrease of 186,270 lb. There was also a reduction of 114,886 lb. in the consumption of Celcure, from 249,713 lb. in 1942 to 134,827 lb. in 1943.

In addition, 20,932,510 lb. of miscellaneous salts and 23,422 gal. of miscellaneous liquids were consumed by the wood-preserving industry. This represents a gain of 15,339,426 lb., or more than 274 per cent, for the salts and a decrease of 171,167 gal., or 88 per cent for the liquids. The explanation for this large increase in the miscellaneous salts is that 20,603,702 lb. of these salts were used in fire-retardant treatments, leaving only 328,808 lb. used specifically for preservative treatments.

The total quantity of miscellaneous material given preservative treatment in 1943 aggregated 313,832,881 ft. b. m., compared with 349,825,203 ft. b. m. in 1942, a decrease of 35,992,322 ft. b. m. or 11.1 per cent. Despite this decrease, the volume of miscellaneous material treated in 1943 has been exceeded in only two years of the 35 years that this record has been compiled. Selected miscellaneous items that are used wholly or in large quantities by the railways are shown in one of the accompanying tables. Included in the foregoing figures of

(Continued on page 483)

Charging a Treating Retort with Crossties at One of the Large Commercial Treating Plants of the Country

Fooling the People with Figures

Automotive claim of numerous "communities" dependent solely on highway transport found to be inaccurate—as is intercity truckers' claim to fifth of nation's traffic

By Dr. C. S. Duncan

Economist, Association of American Railroads

THERE may be some sort of challenge in the letter recently printed in the *Railway Age*, written by a business man long experienced in matters of transportation and to which an editorial was directed.* In effect, the position taken was that business men, such as he, could not know unless they were told what was the significance of the drive to secure federal authority over the state highways in order that bigger trucks might use them in competition with other agencies of transportation.

Highway Spokesmen in Positions of Influence

The powerful highway interests that have been strongly organized and are today extremely active in seeking post-war commitments of the greatest possible advantage to themselves cannot surely be unknown to such a man. It has been pointed out that the chairman of the business men's Committee on Economic Development is also chairman of an automotive promotion organization and president of a motor vehicle manufacturing concern. As head of the C. E. D., he preaches the doctrine of free private enterprise. As head of the automotive interests, he endorses the full program of vast federal and state expenditures for super-highways serving all parts of the country.

The American Road Builders' Association has promulgated a program for the expenditure of billions of dollars by government for building super-highways. This Association elects regularly to its presidency a state highway official and this public official, bearing the responsibility to protect the people's property in highways, regularly appears before committees of Congress as spokesman for the road-building interests. No one from the outside would need to tell the business man, such as the writer of the letter to the *Railway Age*, what his position should be if the president of the Association of American Railroads were also a member of the Interstate Commerce Commission.

The American Association of State Highway Officials a year ago passed a resolution opposing federal regulation of the sizes and weights of motor vehicles using the highway facilities of the states. This year, however, the Association was caught in a dilemma. At the very hour when the U. S. Chamber of Commerce was sending out its resolutions, the A. A. S. H. O. was working with Congress to secure authorization of a billion dollars per year for highway purposes and it did not dare to jeopardize this prospective windfall by strong opposition to federal regulation. Hence, it kept silent.

It would seem to be a mark of cleverness to use a slogan which oversimplifies the issue and carries with it a prejudicial argument. Such a slogan never presents the whole truth and nothing but the truth. The use of "trade barriers" is only a minor incident in the whole highway program. Adoption of the recommendations by the U. S. Chamber of Commerce for continued vast expenditures of public funds and for the making permanent of war-time promotion of trucks heavy enough to destroy the highways is but one result of the activities of organized highway interests. There are others to follow.

If we are correctly informed, this is not the method to build the "bright new world for which we are fighting." That world is to be built solidly and soundly upon truth. There is to be no deception, no further attempt to found a political or economic system upon fallacious premises or deceptive half-truths. Great reliance is to be placed upon private initiative and free private enterprise, working under equitable competition. If this promise is to come true, the time to begin to build such a world is now, and one place to begin is in the use of language that holds no double meaning.

It is equally true that if our transportation system of tomorrow is to be a sound one and each agency is to be developed in such way as it can best serve the needs of commerce, U. S. mail and national defense, under free private enterprise and equality in competition, it must be developed upon the basis of facts that are true and are clearly stated and not upon bifurcated language intended to be, or capable of being, misleading. Government policy toward transportation must be clear-cut and definite, for it is upon this policy that the future of transportation rests.

Such policy cannot long endure half private enterprise and half government enterprise with powerful pressure groups forever seeking handouts.

There seems to be need, therefore, to clarify two matters as to which highway interests are making assertions that are at least misleading. These two matters are a statement in recent newspaper advertising by the American Trucking Associations, Inc., that "these trucks are hauling a 'vital fifth' of America's land-borne freight" and the other is a statement, which recently appeared in an advertisement by a leading automotive manufacturer, that "more than 54,000 or 43 per cent of all our country's communities are served by motor truck and coach transport alone."

"Vital Fifth of Land-Borne Freight"

What basis is there in fact for the claim that trucks are now hauling a "vital fifth" of the land-borne freight of the United States? By inquiry it has been ascertained that the statement is based originally upon the text of an address delivered over the radio on September 19, 1942, by the late Commissioner Eastman, then speaking in the

* See *Railway Age*, August 12, pages 257 and 272.

capacity of Director, Office of Defense Transportation. In that address he said:

"We have nearly 5,000,000 trucks and a little more than 150,000 buses. More than a million of the trucks are operated by or for farmers, 3¼ million by private business concerns and about 600,000 by public carriers. No one knows exactly how much work these trucks are doing. The best estimate I can give you is that they are now carrying locally and between communities about 25 per cent as many ton-miles of property as the railroads."

The Trucking Associations had issued an advertisement based upon this statement claiming that "trucks carry one-fourth the load," meaning by load the amount of domestic traffic transported in the United States. It was then pointed out to the Association that the Eastman statement referred to all kinds of trucks and not to the 250,000 trucks operating for hire either interstate or intercity within a state. The claim now made is that trucks carry one-fifth of America's land-borne freight.

This estimate, however, is substantially too high. After a careful survey of all the data available from the Interstate Commerce Commission and other sources the railroads have estimated for the year 1943 the following proportions of freight traffic handled by each agency on the basis of ton-miles:

Railroads	71%	Trucks	5%
Great Lakes	12%	Inland Waterways	3%
Pipe Lines	8%	Airplanes, et al.	1%

In this estimate the item "trucks" refers to intercity service and includes both private operations by owners hauling their own goods and for-hire operations by common and contract carriers.

The advertisement by the Trucking Associations contains a plea for the continuation of the Office of Rubber Director until an adequate number of tires is actually in production. The demand is for large size tires, "8.25 and over," which, of course, could not be intended for the small trucks that make up 85 per cent of the total number. Even if the Trucking Associations are undertaking to speak for private operations which are not represented in their Associations, the claim of one-fifth is clearly too high and, if the Associations are speaking only for intercity, for-hire trucks, the estimate would again have to be cut in half. The fact is that the trucks do not carry one-fifth of the land-borne freight of the United States if, as the statement implies, the actual carriage in ton-miles is meant. It is far less than that amount.

Do Trucks Monopolize the "Vital" Traffic?

And then there is the adjective "vital." What is the basis for the use of this adjective? High authorities in government have declared that trucks are doing an excellent job in aiding the war effort. That they are needed, there can be no question. On the other hand, there is no call for pretending that the need for trucks is more important than it really it. Other agencies also are engaged in the war effort. They, too, handle all kinds of traffic, including the "vital" traffic. It has been estimated that the railroads are carrying more than 90 percent of the war traffic, among which there must be a substantial amount of "vital" traffic. No one has ever yet pointed out a reason why the freight carried by trucks is more "vital" than the freight carried by pipe lines, airplanes or railroads.

As we build for the future, then, let us build on solid fact and not on "weasel" words. One can well understand why the highway interests, like the waterway interests, are chagrined because actual experience has demonstrated the fallacy of their claims as to the need and justification of vast government expenditures on highways and waterways as an aid to national defense. When the days of trial came the dependable railroads, with their marvelously expansible capacity for service, have proved to be the preeminent agency in national defense. That fact is acclaimed by those who are served by railroads, and the railroads themselves do not have to make exaggerated claims. They are known and recognized by their deeds.

What Is a "Community"?

There is carried in the pamphlet "Motor Truck Facts," 1942 Edition, page 11, the following heading to a table—"54,000 U. S. Communities Depend Entirely on Motor Vehicles," and as a sub-head "(1940 Analysis of Communities and Population, Including Number Without Railroads)." It may be presumed that the automotive manufacturer's recent advertisement, referred to above, is based upon this statement.

Investigation discloses that the method used in the "Analysis of Communities" is to examine a standard atlas, which sets out to give the names of all "cities and towns" or "communities" in the United States and by states, indicating in each instance, *inter alia,* whether or not served by railroad. It would appear to be a simple matter to cross out in the atlas all "communities" that are indicated as being served by railroad, then add up the remainder and total the population in them. The result would be expected to be the number of communities not served by railroad, together with the total population living in such communities.

There are, however, two "catches" in this method. One is the meaning of the word "communities" and the other is the meaning of "served by railroad."

Of local maps issued by a standard publisher of geographical matter it is asserted that they show "all cities—towns—counties—railroads—waterways—physical features," and have a "list of cities and towns with complete population." They are said to include the "locations of over 122,000 communities in the United States." Of these communities "only about one-third are post offices." It is further said that the enumeration comprises "the most complete and up-to-date list of post offices and non-post offices in print." There is no claim that the publication is an authority as to what is a city or what is a town or how a "community" differs, if at all, from other civic units. The quotations indicate beyond a doubt that the word "community" as used is not intended to convey in all instances the meaning of an economically distinct civic sub-division. Inspection of the same publisher's atlas indicates that "community" as used in this publication designates a locality or subdivision to which a local name has been attached. It may be a particular section of a city, such as a real estate development or an institution, or a suburban development included within the city limits or a post office that bears a name. All of these are considered "communities" if a name has been given to them and they are called locally by that name.

Small Part of Population "Not Served by R. R."

As to being "served by railroad," the situation is not wholly clear. Apparently service by railroad covers both situations where a station is located in the "community" and instances where railroad tracks have been actually laid through the community limits, whether or not a local station exists. Inspection leaves the impression that the classification may not always be uniform. This observation is not intended as a criticism, for the atlas was never compiled for such use as has been made of it in the matter that is being discussed.

The publication "Motor Truck Facts," 1942 Edition,

prints a table (p. 11) which purports to give by states the total number of "communities," 125,617, the number not served by railroads, 54,453, the percentage of communities not served by railroads to the whole number of communities, 43.3 per cent. It also has a column showing non-farm population for 1940 by states totaling 101,479,210, a column showing the population by states of the "communities" not served by railroads, 6,933,217, and a column showing the percentage of the population in "communities" not served by railroad to the total non-farm population, 6.8 per cent.

How "Motor Truck Facts" Tabulates Non-Railroad "Communities"

(1940 Analysis of Communities and Population Indicating Number Without Railroads)

	COMMUNITIES			POPULATION		
	Total communities	Not served by R.R.		1940 Non-farm population [48 States Listed]	Not served by R.R.	
		Number	% of all		Population	% of all
D. C. ..	1	0	0	663,091	0	0
Total ...	125,617	54,453	43.3	101,479,210	6,933,217	6.8"

Public statements as to this table usually emphasize the number of "communities" not served by railroad, 54,453, and the percentage of these communities to the total number of communities, 43.3 per cent. It is of far more significance to observe that these "communities" not served by railroads, while constituting 43.3 per cent of the total number, contain only 6.8 per cent of the non-farm population. They must be small, for their average population is obviously only 127 persons.

This, however, is not the main point. It has been noted that these "communities" include every locality with a local name attached, even real estate developments, post offices, institutions and suburban areas within city limits. An example will clearly illustrate the matter. In earlier editions Motor Truck Facts made no reference to the District of Columbia. The 1942 edition, however, carries at the end of the list of states "D. C." and under the "Total Communities" column is the figure "1"—with no community not served by railroad and no part of the population not served by railroad.

U. S. Treasury Is Counted as a "Community"

In a standard local map for Delaware, Maryland and the District of Columbia, 1940, there are listed in the District of Columbia 78 "cities and towns" of which 57 are listed as communities not served by railroad. In the 1942, 1943 and 1944 editions of this publication there are 84 "cities and towns" in the District, 62 of which are communities not served by railroad.

Probably many people are sufficiently familiar with the Nation's Capital to appreciate the significance of the names of certain communities in "D. C." listed as not served by railroad. For examples: "Treasury," at 15th and Pennsylvania avenue; "West End," a post office on Pennsylvania avenue opposite the old Interstate Commerce Commission Building; "Cleveland Park," a real estate development; "Cathedral Heights," named for the great Episcopal Cathedral; "Benjamin Franklin," a post office along Pennsylvania avenue; "Columbia Road," a post office; "Chain Bridge," "Rock Creek Bridge," "Walter Reed," a soldiers' hospital; "Naval Hospital"; "Navy Department"; "U. S. Marine Barracks." These surely are not the kinds of communities a general reader would have in mind upon reading in an automotive manufacturer's advertisement the statement that "more than 54,000 or 43 per cent of all our country's communities are served by motor truck and coach alone."

The small state of Delaware is dominated by the city of Wilmington. In connection with this city, communities as listed in the aforementioned atlas as without railroad service and included within the corporate limits of Wilmington are Bellfont, Elsmere, Forest Park, Oak Grove, Richardson Park, Shellpot Park, etc. There are 13 of them. Anyone familiar with these communities will recognize the absurdity of saying they are without railroad service.

In the same manner, Providence dominates the small state of Rhode Island. Within the city limits of Providence are communities listed as having no railroad service. There are 34 of them. Inspection of the atlas in connection with the city of Portland, Oregon, shows that there are 54 so-called "communities" within the boundaries of that city without railroad service. To say that such localities as these are without the service of railroads, is certainly misleading.

On Marthas Vineyard Island are Vineyardhaven, Oak Bluffs, Edgartown, North Tisbury, West Tisbury and Gayhead. On Nantucket Island are Nantucket and Siasconset. All of these are listed in the atlas as cities and towns of Massachusetts. No railroad bridge connects these islands with the mainland and they are not served by rail. There are no highway bridges and they are not served by motor truck and coach. They are listed, however, as being without railroad service and as being among the communities served by motor truck and coach transport alone. They are, of course, dependent upon water service.

A Deceptive Chart

In order to give such data more telling effect upon the reader there was presented on page 10 of Motor Truck Facts, 1942 Edition, a map of the United States and for each state a circle was presented in which a sector was blocked out by green coloring to represent the per cent of "communities not served by rail," as above defined, to the total number of communities listed in the state. There is also a circle which represents the United States with 43.3 per cent of the area blocked out, even though according to the figures given in the table on page 11 the communities listed as without railroad service had only 6.8 per cent of the total non-farm population.

For California 33.8 per cent is blocked out but represents only 4.8 per cent of the non-farm population. Oregon is blocked out to the extent of 48.4 per cent but represents only 7.5 per cent of the population. Texas is 41.8 per cent blocked out, representing 7.4 per cent of population. South Dakota is 34.8 per cent blocked out, representing 4 per cent of the population. Tennessee is blocked out to the extent of 63.3 per cent, representing 10.7 per cent of the population. New York is 53.9 per cent blocked out, representing 4.1 per cent of the population. Iowa is blocked out 26.3 per cent, representing 2.3 per cent of the population. Indiana is blocked out 49.6 per cent, with 3.8 per cent of the population. Illinois is 26.8 per cent blocked out with 1.9 per cent of the population. Nebraska is 25 per cent blocked out, representing 1.7 per cent of the population. There can be no doubt that such methods are misleading. The general use of the data clearly shows that responsible business corporations have been misled.

As to the state of Indiana, the statewide highway planning surveys made cooperatively by the then Bureau of Public Roads and state authorities, contain maps by counties showing the location of cities and towns served by rail and by motor truck. A check of this survey reveals that there are 528 incorporated cities and towns in that state, of which 472, or 89.4 per cent are served by rail and 56, or 10.6 per cent are not served by rail. The 472 incorporated cities and towns located on railroads

contain 99.2 per cent of the total population of all incorporated cities and towns in the state.

It is interesting to note that for the year 1916, before the development of truck and coach transportation, the atlas shows a total of 131,980 cities and towns or communities. The Railroad Official Guide for the same year lists approximately 84,000 stations. This leaves 47,980 communities that might well be classed as without railroad service in that year. It is clear, therefore, that these so-called "communities without railroad service" are nothing new. There was the same condition in the horse and buggy days. These communities were not built by trucks and buses and were not dependent upon trucks and buses in their origin and development. A study might well reveal that the improved highways and the use of motor vehicles with their wider range have caused many of them to disappear. It follows, then, that the figures as issued and widely publicized by the highway interests are unfair and unreliable. A national policy toward transportation—if based upon such a misrepresentation of the true facts—will not conform to economic reality and, hence, cannot safeguard the national interest in an economic division of transportation among the several agencies, according to the "inherent advantages" of each.

Purchases Top

(*Continued from page 477*)

Fuel purchases for the first half amounted to $309,585,000, 18 per cent more than the $262,096,000 spent for this purpose in the similar period of 1943, 52 per cent more than for the first six months of 1942, 96 per cent more than for the first half of 1941 and almost $36,000,000 more than fuel purchases for the entire year of 1940.

Slight Increase in Inventories

The total inventories of Class I roads on July 1 aggregated $588,622,000 and included about $416,430,000 of miscellaneous materials and supplies, $22,766,000 of new and second-hand rails, $76,946,000 of crossties, $62,858,000 of fuel and $9,622,000 of scrap. Inventories in the aggregate have shown an increase of approximately 10 per cent since the first of the year when the total stood at $532,721,000. The greatest increase was in fuel supplies which were 25 per cent greater at the end of the first half; rails show a 2 per cent gain, crossties gained 13 per cent, miscellaneous materials and supplies, comprised largely of storehouse stock, increased 12 per cent, and scrap showed a slight decline.

War Curbs

(*Continued from page 479*)

miscellaneous material are 61,348,417 ft. b. m. that were given fire-retardant treatment. Only 6,472,646 ft. b. m. of the miscellaneous material were treated by non-pressure (open-tank) processes; the remainder being pressure-treated.

For the first time in the history of wood preservation, in 1942, a sufficient volume of wood was given fire-retardant treatment to make it worth while to record. In that year a total of 22,284,402 ft. b. m. was treated for this purpose, for which 5,151,284 lb. of fire-retardant salts were used. In 1943, a total of 65,636,518 ft. b. m. was given fire-retardant treatment, and the consumption of the fire-retardant salts was increased to 20,779,511 lb.

During the year there were 234 treating plants in the United States, 2 less than in 1942. Of these, 229 were in active operation, 4 were idle and 1 was abandoned. For the first time in many years no new plants were constructed. Of the total number of plants in existence, 188 were commercial plants that treat wood for sale or by contract; 22 were owned and operated by the railways; and 24 were owned and operated by public utilities, mining companies and others, to supply their own needs.

New Book . . .

Proceedings of the American Railway Engineering Association for 1944. 771 pages, 6 in. by 9 in. Bound in cloth or half morocco. Published by the Association, 59 East Van Buren street, Chicago. Price—cloth $8, half morocco $9.

This volume contains the complete record of the activities of the association for the year ending with the annual meeting last March, and includes the reports of the 28 standing and special committees and the discussions that followed their presentation at the meeting. There are also included 12 addresses of special interest to railway officers dealing with the effect of the war on railway operation and maintenance and the special wartime problems of securing labor and materials, namely, by J. M. Symes, vice-president, Western region, Pennsylvania; by H. L. Carter, director, Bureau of Employment and Claims, Railroad Retirement Board; by T. A. Blair, assistant chief engineer system, Atchison, Topeka & Santa Fe; by W. G. Powrie, engineer maintenance of way, Chicago, Milwaukee, St. Paul & Pacific; by R. L. Groover, associate director ways and structures, Office of Defense Transportation; by Albert C. Mann, vice-president, purchases and stores, Illinois Central; by A. A. Miller, chief engineer maintenance of way and structures, Missouri Pacific; by A. L. Sparks, architect, Missouri-Kansas-Texas Lines; by A. B. Pierce, engineer water supply, Southern; by Lt. Col. Ralph E. Sherer, engineer maintenance of way officer, Military Railway Service; and by C. E. Smith, vice-president, New York, New Haven & Hartford.

Also included are monographs on Progress in the Study of the Relation of Track and Rolling Stock; on Studies of the Pressure as Affected by the Area of Contact Between Wheel and Rail; on Fatigue Failure in Its Relationship to the Strengthening and Repair of Steel Bridge Members; on an Investigation of Electrolytic Corrosion of Steel in Concrete; and on an Impact Investigation of a Plate Girder Bridge on the Pennsylvania at Elkton, Md.

The great diversity of subjects, 114 in number, covered by the reports, include practically every phase of railway engineering and maintenance; many problems of operation, especially as affected by facilities; and numerous studies and discussions of the economics of railway location, maintenance and operation. Because of its wide scope, this volume is of value equally to maintenance, engineering and operating officers. Substantially all of the reports represent the result of several years' intensive work by the various committees, and it is this thorough background of study that has given the proceedings of this association their high standing in engineering literature.

Space permits mention of only a few of the outstanding features in addition to the addresses and monographs mentioned previously. Among these is a discussion of the causes of shelly spots and head checks in rail. One report discusses fire-resistant wood for railway buildings. Another discusses the effect of high speeds on railway operating expenses; still another reports on the economics of reduced rate of curvature on existing lines; a fifth covers welding of manganese castings in special trackwork; and another discusses grades in hump classification yards. Other valuable information includes recommendations for conserving labor and materials and for the use of substitute non-critical materials in many instances. Among the important features of the proceedings are statistical data for the previous year on rail failures, crosstie renewals and crosstie service records.

Railroads-in-War News

Asks Tighter Rein on Mexican Traffic

Car Service Division, A.A.R., moves to minimize delays and avoid congestion

All railroads have been advised by the Car Service Division of the Association of American Railroads that strict compliance with the provisions of that division's embargoes on commercial freight destined to Mexico is essential to maintain the rigid control of this traffic that must be enforced to minimize delays to United States roads' equipment and to avoid congestion of the lines of the National of Mexico.

Carload and l.c.l commercial freight for export to Mexico and domestic freight for delivery at Mexican border points is subject to Embargo No. 42, while a permit system set up under Embargo No. 400 covers carload freight for export to Mexico, routing to or via the National of Mexico, or intended for truck transshipment at any border gateway. As noted in *Railway Age* of August 26, page 351, R. M. Campos, assistant traffic manager of the N. de M., is now stationed at Washington, D. C., to adjust the approval of permits to the conditions prevailing on the Mexican lines, and permit applications are cleared through his office, whether they originate in Mexico or the United States.

According to Car Service Division Chairman Kendall, some shippers are attempting evasion of these regulations. "Their feeling is apparently that if their shipments can reach the border, the cars will be permitted to be crossed in order to save car delay. Such is not the case and in these instances the originating railroad will be called upon to furnish disposition for the cars." Agents are advised to watch for evidences that shipments billed to border points are intended for export even when billing is endorsed "Not for export," and it is suggested that movement "in bond" or use of Foreign Economic Administration export license numbers might be among such evidences.

Ross Praises Work of M. R. S. in European Theater

Military railway personnel and units of the Transportation Corps have been commended by Major General Frank S. Ross, chief of transportation, for "excellent and noteworthy accomplishments in the recent assigned task of moving supplies to the forward armies," it has been learned from headquarters in the forward communications zone, European theater of operations.

His letter, posted on all unit bulletin boards and read to all personnel and units, follows, in part:

"In spite of adverse operating conditions, limited communication facilities, poor track, shortages of personnel, motive power and rolling stock, you completed the mission assigned to you in a very noteworthy and commendable manner. You worked long and hard at your job until its completion, and have proven to all and sundry that the motto, 'The Transportation Corps Will Furnish the Necessary Transportation' is not something to be taken lightly."

Noting that with the further extension of the battle lines, the railroads would be called upon to carry even more of the burden of keeping the armies supplied, General Ross expressed confidence that they would perform to this end.

Some Steel Is Set Aside for Passenger Cars

In disclosing on September 18 that a reserve of 37,000 tons of carbon steel, plus other materials in proportion, has been set aside by the War Production Board for the fourth quarter of this year, to cover a number of non-military programs set up by claimant agencies for civilian interests, including the Office of Defense Transportation, the W. P. B. pointed out that part of this material has been allotted for railroad passenger cars and light trucks, subject to the precedence of war needs and production feasibility under current conditions.

Army Railroaders Get "Doughnut Car"

Red Cross feminine contingent pursues lonely GI's along rail lines in Italy

An American Red Cross mobile refreshment car, first of its kind in the Italian war theater, and the most complete unit so far placed in operation anywhere overseas, is now "on tour" of isolated points along the railroad lines in Italy bearing doughnuts and coffee to army railroaders "who get stranded on lonely jobs."

The "doughnut car" was converted from an old Italian railroad coach by Company "C" of the 753rd Railway Operating Battalion, under the supervision of two former Beech Grove-New York Central men, Capt. F. J. Kossuth and 1st Lt. T. E. Wilder, Jr., of Indianapolis.

The new car is equipped with sleeping quarters for six, storage room for supplies, ice box, screened windows, a 150-gal. overhead water tank, a 5-kw. electric generator for lights and power, gasoline supply tanks, kitchen fans and doughnut machines brought from the States.

"We can make 6,000 doughnuts a day with this equipment, and under pressure, we might boost it to 8,000," one Red Cross

Photo by Kendall, 753rd Ry. Shop Bn.

General Gray, at Dedication of Car, Is Flanked By Red Cross Feminine Personnel

worker assigned to the unit announced. "General Gray says we can go anywhere we want to that has a track leading to it, so we probably will. We want to hunt out a lot of those little isolated groups of GI's who get stranded on lonely jobs out along the railroad lines, and who don't have the facilities for entertainment found in larger centers."

Before being placed in operation, the car was inspected by Brig. Gen. Carl R. Gray, Jr., Director General of the Military Railway Service. Red Cross officers showed up, and, when the shop whistle blew, army railroaders who helped build the rolling refreshment stand, were right on deck for doughnuts and coffee. The question of an appropriate name came up.

"Everything should have a name," said General Gray. "Tell you what we'll do. Let's have a little competition. All of you Company C boys turn in suggestions and I'll do the judging. The winner will get two dozen extra doughnuts." From some 100 suggestions the General chose "The Yankee Dipper."

All along the route the exterior of the car collects names, addresses and gags, soldiers adding new ones as fast as the old ones are washed off. As one Red Cross girl accompanying the train put it, "It is just like living in a goldfish bowl. We have flashlights shining in on us at all hours of the night as men come along trying to read the chalk marks on the sides."

B. & O. to Employ 500 More Mexicans

On September 19, 500 more Mexican laborers left the border town of Laredo, Tex., and proceeded to various points along the lines of the Baltimore & Ohio, as a result of working arrangements recently completed between the War Manpower Commission and the Mexican government. This brings to about 1,350 the total of Mexicans now employed by the B. & O., less than 100 having returned home following expiration of their contracts.

The new group was sent to the following points: In Ohio—Hamilton, Apco and Girard; in Maryland—Aikin and Singerly; and, in Pennsylvania—Eddystone and Philadelphia.

Riding the special 14-car train bringing in the new contingent were Charles E. Bull and Harry W. Murphey, representatives of the Railroad Retirement Board, at Baltimore. A squad of special B. & O. police was also aboard.

Johnson Expects New Peak in Freight Load Next Month

A statement praising the "country-wide newspaper support of the government's transportation conservation program" was made public September 20 by Col. J. Monroe Johnson, director of the Office of Defense Transportation.

"The demand for military and civilian transportation of freight will, in October, I believe, be greater than at any time in our history," he said. "Transportation by commercial motor vehicles, which continues at a high rate, is being seriously affected by a critical shortage of tires. Passenger transportation by railroads and intercity bus continues to increase due to the maintained high level of organized military movements within the country and a rapidly increasing amount of furlough travel.

"In the next few months, giving due consideration to the effects of the end of the war against Germany, American transportation will require greater co-operation from the public and from industry than has been asked for to date. . . . I do not believe there will be any real or lasting solution to the transportation problem—either freight or passenger—until the end of hostilities with Japan."

Orders Control Movements of Lake Grain to Elevators

The War Food Administration has issued an order, WFA 114 to control movements of water-borne grain into elevators at all Great Lakes ports, while the Office of Defense Transportation has amended its Order 25A to provide that no lake vessel shall transport grain unless the shipper has first complied with the W. F. A. order by obtaining a permit. Both orders became effective at 12:01 a. m. September 18, and they supersede the previous permit system of the O. D. T.

The latter, the W. F. A. announcement said, was instituted when there was a shortage of vessels on the lakes. It added that "with adequate Great Lakes shipping now available, a shortage of elevator space at Great Lakes ports and at the seaboard, necessitates control of storage to prevent congestion and protect essential grain movement." Cargoes stored in vessels at lower lake ports, for unloading into elevators during the winter months, are also covered by the orders.

Williamson Promotion Confirmed

The Senate on September 15 confirmed William J. Williamson's nomination by President Roosevelt for promotion from the rank of colonel to that of brigadier general. Brigadier General Williamson is chief of the Traffic Control Division of the Army Transportation Corps.

Celebration in Iran Marked Delivery of Millionth Ton

When the "censored" millionth ton of freight delivered by the American railroad operating to Russia reached Teheran, in Iran, some time ago, there was a large celebration, with high officials of American and Russian armies on hand. Bands played, honor guards saluted, and the Diesel locomotive was decked in flags, and at its throttle was a furloughed Lehigh Valley employe, from Delano, Pa.

Lt. Col. J. J. Clutz, commanding officer of the 730th Railway Operating Battalion, formerly a division engineer of the Pennsylvania, wrote to President F. R. Gerard of the Lehigh Valley telling him of the occasion. He reported that the engineer of the train was T/4 Michael Okal, former L. V. employee.

Col. Clutz wrote Mr. Gerard that "During its trip from the ports to Teheran, the train was handled by several different railway operating battalions of the Third Military Railway Service. A check-up showed that men from 10 United States railroads, together with Iranians and soldiers who had had no railroad experience prior to their entry in the Army, handled this train over the various operating districts. It is interesting to me to note that of all these 10 different railroads, only two were represented by more than one man, the Pennsylvania, with nine, and the Lehigh Valley, with two."

August Ton-Miles

The volume of freight traffic handled by Class I roads in August amounted to approximately 65,900,000,000 ton-miles, according to a preliminary estimate based on reports received by the Association of American Railroads. The increase over August 1943 was one per cent.

Class I roads in the first eight months of 1944 performed four per cent more revenue ton-miles of service than in the same period of 1943. The 1944 total was also 22.5 per cent greater than 1942 and almost 2½ times that of 1939's eight months.

The accompanying table summarizes revenue ton-mile statistics for the first eight months of 1944 and 1945.

	1944	1943	Per cent Increase
First 6 months	368,733,820,000	349,935,690,000	5.4
July ...	*62,750,000,000	63,742,367,000	d1.6
August.	†65,900,000,000	65,103,271,000	1.2
8 months' total ..	497,383,820,000	478,781,328,000	3.9

* Revised estimate.
† Preliminary estimate.

O. D. T. Appointment

S. E. Shoup has been appointed associate director, Division of Railway Transport, Office of Defense Transportation. He will be in charge of controlled materials—ways and structures. Mr. Shoup succeeds R. L. Groover, whose assistant he has been since June, 1942. Mr. Groover resigned to return to the Atlantic Coast Line as assistant chief engineer.

August Lake Traffic

Great Lakes vessels in August transported 12,288,253 gross tons of iron ore, 7,487,033 net tons of coal, and 25,745,224 bushels of grain, according to the Office of Defense Transportation. The announcement pointed out that the movement of iron ore was "slightly under" that of August, 1943, while the coal shipments were up by more than a million tons, and the grain traffic was three times that of August last year. There are now 312 lake vessels engaged in hauling these commodities.

Equipment on Order

Class I railroads on September 1 had 36,157 new freight cars on order, according to the Association of American Railroads. On the same date last year they had 28,433 on order.

This year's September 1 total included 12,306 hopper, 3,204 gondolas, 497 flat, 15,746 plain box cars, 1,811 automobile box cars, 2,093 refrigerator, and 500 stock freight cars.

The Class I roads also had 554 locomotives on order on September 1, compared with 1,038 on the same day in 1943. The former figure included 150 steam, two electric and 402 Diesel-electric locomotives, compared with 461 steam, four electric and

573 Diesel-electric locomotives one year ago.

Class I roads put 22,312 new freight cars in service in the first eight months this year compared with 15,744 in the same period last year. Of the total 3,538 were installed in August. Those installed in the first eight months included 10,865 hopper, 2,334 gondola, 1,018 flat, 1,897 automobile box, 5,927 plain box, and 270 refrigerator freight cars and one other car.

They also put 657 locomotives in service in the first eight months of 1944, of which 241 were steam, one electric and 415 Diesel-electric. Locomotives installed in the first eight months of 1943 totaled 408, of which 264 were steam, 14 electric and 130 Diesel-electric.

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since September 7, and which are of interest to railways:

Aluminum—The W. P. B. will discontinue allotting aluminum in the eight specified forms, and hereafter will use the word "aluminum" to indicate any and all of these forms, according to Direction 56 of CMPR-1. Previously W. P. B. allotted aluminum in the following eight forms: (1) rod, bar, wire and cable; (2) rivets; (3) forgings, pressings and impact extrusions; (4) castings before machining; (5) sheet, strip, plate and foil; (6) tubing; (7) tube blooms and (8) ingot and powder.

Officials explained, however, that consumers' applications to W. P. B. must continue to specify the particular forms of aluminum desired. A person who has received an allotment in terms of the eight forms may combine such allotments into one account. He may thereafter make allotments to his suppliers in terms of "aluminum" without further specification. In placing authorized controlled material orders for aluminum, he may charge them against such a single account, irrespective of the forms or shapes desired. Officials further explained that if a person receives an allotment in one or more of the specified shapes, he may treat it as an allotment of "aluminum" without regard to such shapes.

Aluminum is now available for the manufacture of metal loose-leaf binder parts and units, and mechanical bindings under an amendment to L-188.

Builders' Hardware—Restrictions on the use of aluminum and zinc in builders' finishing hardware, cabinet locks and padlocks, and on the use of brass in essential working parts of cylinder locks have been removed by an amendment to Schedule 1 of L-236.

Bricks—An increase of $1 per M in manufacturer's present maximum prices for common and unglazed face building bricks produced in New Jersey, has been provided by Amendment 50 to Order A-1, MPR 188.

Construction Machinery—Special sales of new construction machinery items in List B of PR-13 must be authorized by the W. P. B. through approval of applications made on WPB Form-1319. List B incorporates items of construction machinery in Schedule A of Order L-192. A "special sale" under PR-13 means a sale of material or products by a person who does not regularly, in the course of his business, sell such material or product in the form in which he holds it. This statement corrects an inadvertent error in press release WPB-6313, covering PR-13, issued August 19, W. P. B. said.

Copper—Copper may be used as an undercoating for chromium and nickel plating, according to an amendment to Conservation Order M-9-c, which previously prohibited such use. The change is expected to bring about a substantial saving in man hours and in chrome and nickel materials by reducing the number of rejects of plated products, and to increase the life of such products materially, W. P. B. said. Both chrome and nickel are in short supply.

Cordage and Burlap—W. P. B. officials declared recently that they cannot foresee the possibility of any revocation or relaxation of present orders controlling the production or use of cordage or burlap, which might be expected upon the collapse of Germany. Present short supplies of burlap and cordage-making fibers are caused by the war with Japan and until some of the territories now occupied by the Japanese can be freed, no easing of restrictions can be forecast. Fourth-quarter military requirements for burlap and rope are so great that it is impossible to foresee any relaxation of restrictions for civilian needs.

Lead—GO-M-38 restricting the use of lead has been amended to embody regulations included in the new PR-25. All requests for exceptions from the restrictions on the use of lead, except for the use of foil in packaging, must hereafter be filed under PR-25, W. P. B. officials said.

Other W. P. B. orders contain restrictions on the use of lead or lead base alloys and an authorization granted under PR-25 will not waive these other restrictions unless the order containing them or a direction to PR-25 specifically states that it will, W. P. B. officials said. In the absence of such a statement, it is also necessary to get relief from the restrictions of the other order in the manner provided in the order, the officials explained.

Metal Furniture and Fixtures—Types of metal furniture and fixtures that are permitted to be made for industrial purposes under Limitation Order L-13-a may be sold without specific authorization from the W. P. B. The permitted types are steel seating equipment designed for use at a workbench or production machine, steel work benches that are required for safety, steel foremen's desks, shop boxes, stacking boxes, tool cases and tool room shelving inserts.

L-13-a, as amended also permits manufacturers to fill orders for not more than $25 worth of any type of metal furniture and fixtures without specific W. P. B. authorization.

Motor Vehicles—District managers of the O. D. T. have been instructed not to accept any applications for purchase of new commercial motor vehicles on the old form (WPB663), as the new simplified form (ODT663) is now available in all district offices.

Pressure Gages—The dial pressure gage industry, which now has a backlog of orders totaling $8,500,000, must fill all war contracts before it can fabricate gages for civilian use, according to W. P. B. officials. However, production without priorities is permissible provided it does not interfere with the filling of rated orders. Manufacture is still controlled by L-272, which simplifies and standardizes the production of this type of instrument, but indications are that it will be revoked after the termination of the war in Europe.

Snow Shovels—Snow shovels that may be made only from steel obtained from idle and excess inventories, are no longer limited to two types with certain gages for the blades. This relaxation was made by an amendment to Schedule 1 of the hand tools simplification order, L-157, issued September 11. Permitted size of the blade remains unchanged—approximately 18 in. wide by 15 in. long.

Steel—Steel distributors may now apply for permission to deliver any off-grade or rejected steel or idle or excess inventory which they have been unable to move from their stock under the C. M. P. regulations. Deliveries may be made to any person who has an approved end-use, but who is not in a position to furnish a C. M. P. allotment number or symbol with his order, W. P. B. said.

Tackle Blocks—End-use restrictions applying to manufacture of tackle blocks have been removed by an amendment to Schedule IV of L-236. The amended schedule also permits additional sizes and designs; extends the permitted use of bronze bushings, and further restricts the use of malleable iron.

Prices

Machine Tools—Manufacturers' maximum list prices for new machine tools that are priced on the basis of a comparable machine tool made by the same manufacturer must be adjusted to reflect the resale discount allowed to dealers or agents, according to Amendment 1 to MPR 67, effective September 12. This action places a new machine tool, that is comparable to others produced by the same manufacturer, under coverage of the provision for resale discount found in the regulation governing prices of new machine tools.

Previously, the price of the new tool was related to the established price of the comparable machine tool. The variation in the cost of the new or modified tool was limited to factory or manufacturing cost. No additional mark-ups for general and administrative expenses and profit were allowed: that is, these cost items were limited to the amount already included in the price of the comparable basic machine. Today's action continues to limit the manufacturer to factory costs. However, by computing the resale discount and adding it to the list price of the modified machine tool where the price is increased, and subtracting it when the price is decreased, the factory cost is more equitable and more successfully figured than under the previous method.

Southern Pine—Consolidation of several price tables in the Southern pine lumber regulation for purposes of simplification and two changes in the regulation's provisions dealing with direct-mill distributors were announced September 15. No change in price realization will result from this consolidation of price tables, O. P. A. said. Some prices are increased and others lowered, and other changes are made so as to simplify their arrangement. These changes were made upon the recommendation of the Southern Pine Lumber Industry Advisory Committee.

Effective September 19, Amendment 4 to Second RMPR-19 also rewords the provision prohibiting distributors from adding a mark-up on lumber produced by mills which they own or control, by enumerating certain circumstances that constitute such ownership or control. The new wording is based on official interpretations of this provision already issued by the O. P. A.

At present, the regulation provides that direct-mill distributors who did a certain type of business during the period March 1, to August 31, 1943, inclusive, can register with O. P. A. as wholesalers or commission men. Today's action amends this provision to provide that such sellers who were either in the armed services or employed by the C. P. A. during that period may use the six months immediately preceding their induction or employment by O. P. A.

The transportation addition permitted over maximum prices on log-run Southern pine lumber in deliveries over 30 miles has been reduced from 10 to 5 cents a mile, by Amendment No. 3 to MPR-19A, effective September 19. O. P. A. said this action had been taken because the 10 cent allowance had led small mills to refuse deliveries within their own areas. Customarily, they deliver free within the local area, which the regulation defined as covering up to 30 miles.

An investigation of contract carrier rates has convinced O. P. A. that five cents a mile will cover the cost of truck delivery without providing an incentive for long hauls, O. P. A. said. The agency emphasized that it had merely intended that the haulage allowance should result in a return of costs for delivering lumber.

A change in the first section of the regulation covering log-run Southern pine lumber specifically provides that the maximum prices listed in the regulation apply to all sales of log-run Southern pine lumber where the lumber produced by small mills reaches the purchaser without first being graded, dressed, inspected, tallied or otherwise made ready for shipment at a concentration yard or mill subject to the regulation covering the larger mills. The effect of the change is to bring within the regulation wholesalers and all other persons who sell lumber produced by the small mills.

Vitrified Clay Products—Maximum prices for vitrified clay sewer pipe and allied products sold in Oregon Zone 1, as defined in the regulation governing prices of these products, will be the same as those prevailing in Washington Zone 3, according to Amendment 6 to RMPR-206, effective September 14.

GENERAL NEWS

More Safety Devices Needed—Wheeler

Railroads and I. C. C. assailed in statement issued by Senator

Listing last week's head-on collision near Terre Haute, Ind., as "one of a long series of preventable wrecks," Chairman Wheeler of the Senate committee on interstate commerce this week called upon railroad managements to install "as soon as the lifting of war restrictions permits," safety devices which have "long been available." He also called upon the Interstate Commerce Commission to abandon its past policy which "has very largely left the matter to the companies," or else "it may become necessary to repeat action taken against inadequate commissions in the past." The Wheeler statement was issued to the press on September 19, and inserted by the senator into the Congressional Record of that day.

Noting the death of members of the Army Air Forces, Mr. Wheeler said the Terre Haute wreck was thus made "particularly tragic." These men, he added, "had faced death in many missions against the enemies of our nation"; and "while traveling in our land, they were killed because our railroad systems have not adequately installed available safety devices."

Directors Should Act—"Every year," the senator went on, "we have similar loss of life on the railroads. Small railroads and big railroads, weak railroads and strong railroads contribute to this unnecessary death toll. Nor is there any indication that the directors of our railroads are ready to change their policies. Meetings of those directors should have been called on the day on which the news was flashed that these aviators had been killed. Railroad boards of directors ought to call special meetings at once to authorize the placing of contracts and, where necessary, the raising of funds for installing these safety devices. . . .

"The railroads should be made to understand that if they do not act within a specified number of days, then the government will act. Twenty-four years ago Congress empowered the Interstate Commerce Commission to command the railroads to install safety devices. The commission has very largely left the matter to the companies. Sharp disagreement with this attitude of inaction was expressed by a distinguished member of the commission, the late Joseph B. Eastman, eight years after Congress had given the commission the power to act. He said he would give the railroads just six months to submit definite plans to the commission. That was 16 years ago. Since then the commission's attitude has not sufficiently changed for the better.

I. C. C. Should Move—"The commission should now quickly ascertain whether the railroads are going to place the contracts for these safety devices, how soon this will be done, and whether this time they will move in dead earnest."

Then came Mr. Wheeler's reference to action taken against "inadequate commissions in the past," from which he went on to hail railroad employees and managements who "have loyally, and with devotion to the public and to the nation, contributed to the transportation system all the efficiency obtainable from human beings." "They, like the traveling public," he added, "are entitled to all the safety now and long since obtainable from science and invention." Meanwhile, the senator appreciates "the difficulties which the railroads have been under during the war," when they have done "an excellent job in handling traffic under great difficulties."

Loss of Gas Rationing Work Will Cut O. D. T. Staff

Transfer of a part of the Office of Defense Transportation's motor vehicle gasoline rationing functions to the Office of Price Administration is expected to result in the release of about 1,000 O. D. T. clerical employees at a saving to that agency of about two million dollars a year. The change, to become effective about October 15, was discussed by O. D. T. Director Johnson in a September 18 statement.

"Present conditions," he said, "require that the O. D. T. regional highway organization direct a greater amount of attention and effort to the transportation phases of the O. D. T. program rather than the detailed work of gasoline rationing. After almost two years' review of gasoline allotments to commercial motor vehicle operators, present certifications reflect the general needs of the industry."

Dewey's Train in Collision

The special train carrying Governor Dewey from Seattle, Wash., to Portland, Ore., over the Great Northern, ran into the rear of a passenger train a mile north of Castle Rock, Wash., on September 19. No passengers on the two trains involved were injured seriously. The accident occurred on the site where, several hours before, a freight train collided with a passenger train, killing one person and injuring two. The Dewey Special had been delayed 12 hours at Seattle while the line was being cleared and the passenger train preceding the Dewey train had slowed down at the scene of the previous accident.

Hurricane Loss Light on Eastern Railroads

Washouts, lines down, short service delays largely characterize damage

Damage to railroads from the hurricane which struck at the northeastern seaboard between 6 and 12 p. m., Wednesday, September 14, and which left a 1,000-mile path of property destruction in a dozen Atlantic states, has not yet been reckoned, but early reports would indicate they fared far better than in the 1938 tropical disturbance which was to them a major catastrophe.

The Central of New Jersey, New York, New Haven & Hartford, Pennsylvania, Long Island and New York Central all reported washouts, communication lines down, debris and trees on tracks, and varying delays in operation, but only one injury. The Delaware, Lackawanna & Western told of water in its passenger station in Hoboken and, in its electric zone, during the height of the storm, suspension of operation for a short time. The Erie, counting itself "very lucky," reported only slight inconvenience. Trees were down on its branch lines in the suburban territory, the railroad explained, but because there is limited service after 9 p. m., no trains were delayed. The Reading advised of no damage at all.

Jersey Shore Hard Hit—Hardest hit on the Central of New Jersey was its seashore branch, which runs from Matawan down to East Long Branch, and serves such points as Atlantic Highlands, Highlands and Seabright. Knocked out worse than in any previous storm of this type was the stretch from Matawan to Highlands. Here washouts were numerous and, in some sections, sand blew across the track in 3 and 4 ft. depths. Service finally was restored to Highlands on the Sunday morning following, with complete resumption of service expected on the balance of the line late in the week. One train was marooned overnight near Seabright, with two passengers and a crew aboard. Another train near Matawan, with between 100 and 125 passengers, was delayed until after midnight, when emergency bus transportation was arranged for.

In all C. N. J. yards along the waterfront, water got so high that all freight movement was stopped, Thursday carloadings on the road falling off about 15 per cent. Passenger trains continued to run over the main line, however, but all trains were late. Ferryboat service from Liberty Street, New York, to Jersey City was suspended between 8:30 p. m. and 9:30, when the storm reached its height in that vicinity. The ferryboat "Bound Brook" broke loose from

the railroad's marine repair yard on the Jersey City waterfront, and drifted to Bedloe's Island, where the railroad reports, "she is still in close communication with the Statue of Liberty." (Oddly, the C. N. J. had only recently chosen "Miss Liberty" as its new insignia.)

Delays in 3rd Rail Areas—Both New Haven and New York Central Harlem division trains were tied up at Grand Central terminal from 8 p. m. until 11:45, because of water flooding the tracks at 149th street, which made it necessary to de-energize the third rail.

At New Haven there was high-water in the cut and no trains were operated out of the city eastbound or into the city westbound between 9:11 p. m. on the 14th and 8:21 a. m. on the 15th. There were six small washouts of minor consequence between New Haven and Boston on the shore line, and 10 or 12 on the Woods Hole branch. Here trains were delayed considerably and it was not until 48 hrs. later that approximately normal service was resumed on the shore line to Boston. Disruption in communication lines was said to be largely responsible for the long delays in service, especially from New York to Boston, where word of track conditions was slow in being passed along the line.

Immediately after the storm had abated, work trains were run over every foot of track, which was inspected, debris removed and repairs made.

Some of the Springfield line trains, as well as certain trains operating to and from points "off line" beyond Springfield, were detoured via Bridgeport and Waterbury. The balance of service was operated between Springfield and Meriden, with bus transfer between Meriden and Wallingford and train service between Wallingford and New Haven and New York.

Not as Bad as '38—Washouts were numerous between New Haven and Providence, and the line was reported in poor shape because of high water between Wareham and Buzzards Bay, and on the Woods Hole branch. Service was restored between Wareham and Buzzards Bay and passenger service was resumed between Boston and Hyannis on Saturday afternoon, the 16th. Washouts for the most part are being repaired by replacing the fill, and in this respect, the railroad reports, the recent hurricane can in no sense be compared to the 1938 storm which damaged bridges, freight and passenger stations, and destroyed wharf properties extensively on the New Haven's shore line.

Train service was restored between Boston and New York shortly after 5 o'clock Friday morning. There were many trains held at South station, Boston, until the storm subsided about 1 a. m. on the 15th, and there were some delays in commuter service in the Boston area.

It was estimated about 1500 passengers were aboard the overnight New York and Washington-bound trains held at South station until about 5 a. m. Friday. Passengers aboard trains which left Boston up to and including 6 p. m. Thursday reached their destinations with only "reasonable delays."

The dining car department instructed cooks to provide free food and coffee to all passengers. In some cases where they were held up in Boston and Providence, travelers were given free food in the station. There was a 15-car special and a 7-car special with 1,314 service men aboard. When these trains pulled into New Haven, the dining car department served them sandwiches, doughnuts, oranges and milk. In many cases, railroad employees attempted to get through messages to relatives and friends of people delayed, and trains which did not have dining car service were instructed to stop at the first available station and have sandwiches brought aboard. Dining car employees were further instructed that when they ran out of food to use their receipts on the first town they hit and buy up whatever they could to feed the passengers.

One Track Out on N. Y. C.—On the main line of the New York Central, there were washouts beneath track 4, between Glenwood and Ossining, rowboats, poles, trees, and all manner of debris being scattered along the line. Freight track 6 above Spuyten Duyvil was out of service, as well. All through the stretch on the river below Ossining track 4 was not used, but it was completely reinstated to service by 3:45 on Sunday. All commuter and freight trains were switched to track 2.

Engineman G. Pulver, who suffered the only injury reported by any of the railroads questioned, was struck in the shoulder by a tree branch which broke the cab glass in the multiple-unit car which he was driving. This occurred east of Mt. St. Vincent station on main line track 3. He received hospital treatment, and returned to his home.

A delay was reported at Bronxville, where the Gramatan coal plant caught fire, and where coal blocked tracks 1 and 2. Track 2 was cleared at 9:55 and track 1, at 11:42 Friday night.

Many Track Obstructions on L. I.—The Long Island expressed the opinion that it undoubtedly had more obstacles to clear away than any other road. Principal damage on the New York zone of the Pennsylvania and on L. I. lines was occasioned by hundreds of trees falling across electric lines, signal wires, and in many cases, on the track itself. In the New York zone, there was little other damage to report. On Long Island, however, 70 multiple-unit electric cars at Long Beach and Rockaway were shorted by water which had risen more than 3 or 4 ft., causing them to be removed from service for temporary shopping of the motors. The trestle across Reynolds Channel, at Long Beach, and the trestle at Jamaica Bay were under 2 ft. of water, and although still in operation, they are expected to require some repairs.

In the stretch from Easthampton to Montauk, there were about two miles of track completely submerged, cinder ballast was washed away, and the entire line between these two points was out of service for 24 hours, buses being employed for substitute service. There was a call for 30 carloads of ballast from Altoona, and by Saturday morning, the line was again back into operation. Damage was done also to float bridges at Long Island City and Bay Ridge.

One steam train which left Port Jefferson at 10:50 p. m., inbound to New York, reached Cold Spring Harbor station where ballast had been undermined on a high embankment. The rails spread apart, the locomotive dropped 12 feet, but the cars remained on the track, and no one was injured. Three eastbound trains were being held at Hicksville, and one was sent out immediately to pick up passengers from the stalled train. The engine of another eastbound train was employed to push coaches off on the siding, and service on this line was resumed the following morning.

Forewarning Was Helpful—One reason the Long Island restored service so promptly, except for the aforementioned Montauk stretch, was because of preparations made following the advance storm warning. In the New York zone and on the Long Island, 3,500 trackmen, signalmen and linemen were mustered into service, and, equipped with cross-cut saws, they removed trees from the tracks nearly as fast as they fell. Officers and supervisors remained on duty 72 hours without rest. The railroad reports it has received hearty praise of management and employes from the press and civic associations. Those directly responsible for handling emergency operations and restoration of service were: George Le Boutillier, vice-president in charge New York zone, Pennsylvania, and the Long Island; H. T. Frushour, general manager; C. E. Adams, chief engineer; A. L. Stewart, superintendent passenger transportation for the New York zone and the Long Island; J. B. Jones, superintendent, New York division; and E. L. Hofmann, superintendent, the Long Island.

N. Y. P. & N. Line in Trouble—The Pennsylvania reported that its ferry line between Norfolk and Cape Charles was suspended from operation for several hours the 14th because of high seas and heavy winds. This necessitated detouring of four trains from Philadelphia and Wilmington, via Washington and Richmond. The storm rolled right up the peninsula, and damaged the N. Y. P. & N. line all the way up, principally by blowing trees across tracks, and tearing down signal lines and poles.

There was only one difficulty reported on the Chestnut Hill branch, in Philadelphia. A large tree fell across the track at Allen's Lane, knocked down the catenary and blocked the tracks for two hours. On the Atlantic division, from Camden to Point Pleasant, there was a washout at Lavallette, which caused annulment of two trains, one up and one down, with passengers being accommodated by bus. On the seashore line, the Ocean City branch was put out of service because of a washout. It was the following day before service there was resumed. During that time people were handled by bus from Atlantic City or from Tuckahoe, the point on the main line where the Ocean City branch turns off. On the Atlantic City main line from Philadelphia and Camden down, the service was affected from 4:30 p. m. until after midnight, with delays as high as two hours. One track was again open at 6 p. m., and the other by 5:30 a. m. Friday.

On the P. R. R. New York division, a commercial power line of the Public Service Company of New Jersey fell across

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the catenary line east of Trenton, at 6:12 p. m., and short-circuited all of the electric installations between Princeton Junction and Morrisville, affecting signals down as far as Bristol. There was some high wind damage to wires in the Jersey Meadows, but none very serious. On the New York and Long Branch, the Asbury Park connection, the westbound track was washed out at Morgan for two hours.

The New York weather bureau reported wind velocity as follows:

8 p. m.	62	m.p.h.
8:10	74	"
8:25	80	"
8:30	95	"

Ask Reopening of Staley Case

The railroads concerned in the A. E. Staley Manufacturing Co. terminal allowance case have petitioned the Interstate Commerce Commission to reopen its I. & S. No. 4736 and related proceedings to give consideration to "changed conditions" which, they assert, should lead to different findings The petition was filed by the Baltimore & Ohio, Illinois Terminal, Pennsylvania, Illinois Central, and Wabash.

The commission's order requiring the roads serving the Staley Co. plants at Decatur, Ill., to collect a car spotting charge, on the ground that they perform switching services for it beyond those normally performed under line-haul rates, was upheld by the Supreme Court, as reported in *Railway Age* of April 1, page 653. The Staley Co. then contended that changed conditions at its plants, effected since the matter first came before the commission, brought its switching requirements within the bounds of those performed under line-haul rates, but the court held that the remedy lay with the commission if the claim was valid.

The railroads involved now have, in effect, asked the commission to hear their arguments for being relieved from the commission's direction that they collect a spotting charge from the Staley Co., pointing out that the Supreme Court decision was without prejudice to further proceedings before the commission as a result of changed conditions. The commission's finding, the petition said, was based largely on the use of the Burwell yard by the Wabash for its Staley business, which use has been discontinued. Another change in the service performed is that the B. & O. now does switching service at the Staley plant for itself, the Pennsylvania, and to some extent for the I. C., according to the petition. In short, it was asserted, the changes in service performed have been such that the roads are obligated to render the present services under their line-haul rates without additional charge.

Highway Transport as Set Up Under O. D. T. Certificates

Data released this week by the Office of Defense Transportation's Highway Transport Department show that as of last June 30 there were 3,463,487 certificates of war necessity outstanding on 5,279,744 commercial motor vehicles. The property carrier group had 3,316,482 or 96.54 per cent of the certificates covering 4,743,582 power units and 216,128 trailers, while the group embracing passenger carriers and rental cars had 119,005 certificates covering 318,866 power units and 1,168 trailers.

The breakdown of the property carrier group shows that 1,570,940 certificates or 45.73 per cent of the total covered 1,638,416 power units and 9,513 trailers classified as private agricultural vehicles. Other private vehicles totaled 2,241,728 power units and 89,389 trailers, these being covered by 1,345,340 certificates, or 39.17 per cent of the total.

Intercity common carriers had 47,866 certificates, covering 154,967 power units and 64,900 trailers; local common carriers, 53,400 certificates, covering 117,310 power units and 10,803 trailers; contract carriers, 252,982 certificates, covering 342,890 power units and 25,979 trailers; and for-hire tank trucks, 5,460 certificates, covering 14,850 power units and 7,342 trailers. The average annual mileages certified for the for-hire trucks ranged from 50,017 for the tank trucks to 10,073 for local common carriers. The average annual mileage of the farm vehicles was 7,067, while that of other private trucks was 9,823.

Intercity bus carriers had 2,305 certificates covering 21,709 power units and 160 trailers. The average annual mileage certified for the power units was 61,874.

Ticket Black Market Charged to Firm and Four Persons

The Standard Steel Spring Company, Madison, Ill.; Mark H. Briedy, former assistant supervisor of reservations of the St. Louis Union Station; Earl F. Wharton, the company's traffic manager; Truman H. Gilbert, its passenger traffic representative; and Edward F. Hamm, a former company clerk, were indicted by a federal grand jury at St. Louis, Mo., on September 15 on Federal Bureau of Investigation charges of conspiracy to obtain "black market" Pullman tickets. Specifically, the defendants are charged with conspiring to violate the Interstate Commerce Act. The complaint listed 11 counts and charged that officers of the Spring company paid Mr. Briedy $10 weekly to make Pullman reservations for the company.

U. P. Radio Program to Become Sunday Afternoon Feature

"Your America," the weekly half-hour radio production sponsored by the 65,000 employees of the Union Pacific, will become a Sunday afternoon feature on 115 Mutual stations beginning October 15. The program, to be heard from coast-to-coast and from Canada to Mexico at 3 p. m. (CWT), has been carried on another network every Saturday afternoon since last January. In announcing the change, W. M. Jeffers, president of the railroad, said he had always felt that "Your America" was especially suited to Sunday afternoon entertainment. "Moreover, although 'Your America' is sponsored by our employees in celebration of the Union Pacific's Diamond Jubilee, thousands of our own people have been unable to listen to it on Saturday afternoon because they are at work," he added.

Inaugurated as a program to "better acquaint the East with the West," "Your America" opened with a series of salutes to the states in Union Pacific territory, presenting the state governors as guest speakers. The current series each week features a tribute to one of the major industries of the West and Middle West, with a leading representative of the industry as guest of honor.

The program also includes a weekly interview with a railroad employee, broadcast from the Union Pacific shops, yards or offices; a dramatic war story narrated by story-teller Elden Westley; and music by a 44-piece orchestra and 20-voice chorus. No change in the format of the show is contemplated with the switch to Mutual, Mr. Jeffers said.

Chicago Railroad Business Women Meet October 2

The Railroad Business Woman's Association of Chicago will hold its fall dinner on October 2. The guest speaker will be Sigrid Schultz, woman correspondent and radio commentator.

August Operating Revenues 2.3 Per Cent Above August, 1943

From preliminary reports of Class I railroads representing 81.3 per cent of total operating revenues, the Association of American Railroads has estimated that the August gross totaled $665,343,151, an increase of 2.3 per cent over August, 1943's $650,600,932. Estimated August freight revenues were $490,648,747, compared with $477,330,031, an increase of 2.8 per cent. Estimated passenger revenues were $130,194,102, compared with $129,713,971, an increase of 0.4 per cent.

I. C. C. Service Orders

By Service Order No. 234, effective October 1, the Interstate Commerce Commission has suspended tariff provisions allowing more than 72 hrs. free time at Nogales, Ariz., or Brownsville, Eagle Pass, El Paso, Presidio, or Laredo, Tex., on l. c. l. shipments consigned or reconsigned for export to Mexico. This action was taken, it was indicated, because serious congestion at these points has resulted from detention of such freight in cars or freight houses, for customs clearance "and other reasons."

Service Order No. 164, covering the icing of citrus fruits loaded in Arizona, California, Florida or Texas, has been set aside by Service Order No. 164-A, effective September 14. Service Order No. 203, directing the Illinois Terminal to reroute certain carload shipments of coal due to flood conditions, has been set aside by No. 203-A, effective September 22.

Railroads concerned in the movement of rock in carloads from Ormand, Calif., to Anaheim Landing for use on government construction at the Naval depot there have been directed by Service Order No. 233, effective September 16, to weigh on track scales only a limited number of such cars to determine average weights.

Two Emergency Boards Named

President Roosevelt on September 19 appointed two emergency boards under section 10 of the Railway Labor Act to consider labor disputes on the Chicago, North Shore & Milwaukee and the Chicago, Aurora & Elgin and on the Union of Memphis, Tenn., where strikes had been called for September 20, following one postponement.

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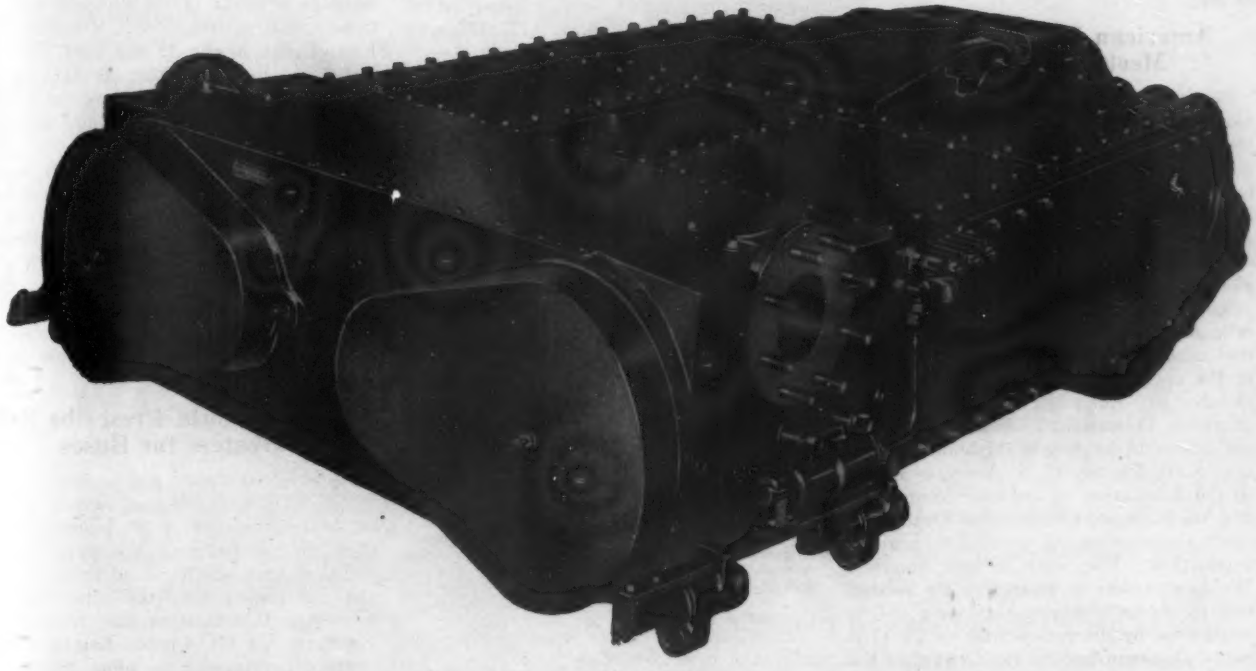
MAXIMUM POWER

FROM THE NEW TYPE "E" BOOSTER*



RECOGNIZING the trend in locomotive design toward higher boiler pressures, and noting the many new factors in current steam locomotive operation, the new Type "E" Booster has been developed expressly to meet today's conditions.

For each Booster application the proper gear ratio is selected for a given boiler pressure, wheel diameter, and adhesive weight to obtain maximum Booster power. A special starting feature enables the new Type "E" Booster to develop full initial starting effort, and a new air control assures efficient Booster operation and engagement at higher speed. Dynamic balancing contributes to smooth operation, particularly at higher operating speeds, and the roller bearing crankshaft, securely housed in the engine bed, makes for smooth running, freedom from lost motion, and long life with minimum maintenance.

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The disputes on the North Shore and C. A. & E. involve the demands of train and engine service employees, who are represented by the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Firemen & Enginemen, for a 9-cents-an-hour increase to bring their wages into line with the general adjustment of last January. These disputes will be considered by a board consisting of Herbert B. Rudolph, justice of the Supreme Court of South Dakota, William H. Spencer, dean of the School of Business, University of Chicago, and Ernest M. Tipton, justice of the Supreme Court of Missouri.

The dispute on the Union involves the application of a National Railroad Adjustment Board decision regarding the work of yardmasters. Here, also, the B. of R. T. and the B. of L. F. & E. represent the employees. Members of the emergency board are Walter C. Clephane of Washington, D. C., John A. Lapp of Chicago, and Frank M. Swacker of New York, all attorneys.

American Welding Society Meets at Cleveland

Seventeen technical sessions embracing more than sixty papers on welding subjects will feature the twenty-fifth annual meeting of the American Welding Society to be held in the Hotel Cleveland, Cleveland, Ohio, from October 16 to 19. The meeting is being held, as in past years, in conjunction with the National Metals Congress.

Three talks emphasizing the importance of welding in meeting the wartime production needs of the nation will be delivered at the opening session on the morning of October 16. Admiral H. L. Vickery, U. S. Maritime Commission, will speak concerning the use of welding in shipbuilding; Colonel S. B. Ritchie, U. S. Army, of its use in the fabrication of ordnance equipment; and W. B. Stout, Consolidated Vultee Aircraft Corporation, of welding in aircraft production. The work of the American Welding Society in promoting the production of needed ordnance equipment will be recognized by the presentation of the Ordnance Distinguished Service Award at this session.

Two Truck Lines Released from Government Control

Two of the 103 strike-bound midwest trucking companies, which were taken over by the Office of Defense Transportation on August 11, were released from government control on September 15. They are Meadows Transfer, Inc., of Des Moines, Iowa, and the Key City Transfer & Refrigerator Line, Dubuque, Iowa.

In announcing O. D. T.'s action, Director Johnson said that there is no existing labor dispute involved in operation of the two companies.

Southwest Board Meeting

The sixty-seventh regular meeting of the Southwest Shippers Advisory Board will be held at Dallas, Tex., on September 28, W. N. Deramus, president of the Kansas City Southern-Louisiana & Arkansas will speak on what is abroad for 1945 in Transportation in the Southwest; general transportation conditions will be discussed by R. E. Clark, manager of the Car Service division of the Association of American Railroads; and at a luncheon session, John H. Frederick, professor of transportation and industry of the School of Business Administration, at the University of Texas, will speak on The Over-All Southwest Post-war Transportation Picture.

Freight Car Loading

Loadings of revenue freight for the week ended September 16 totaled 892,358 cars, the Association of American Railroads announced on September 21. This was an increase of 66,405 cars or 8.0 per cent above the preceding week, which included the Labor Day holiday, a decrease of 10,408 cars or 1.2 per cent below the corresponding week last year, and a decrease of 10,741 cars or 1.2 per cent below the comparable 1942 week.

Loading of revenue freight for the week ended September 9 totaled 825,953 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, September 9			
District	1944	1943	1942
Eastern	146,634	154,016	145,443
Allegheny	180,217	183,892	173,386
Pocahontas	54,644	55,570	53,369
Southern	113,375	115,091	113,119
Northwestern	134,717	135,672	141,542
Central Western	128,066	121,937	121,847
Southwestern	68,300	68,492	66,191
Total Western Districts	331,083	326,101	329,580
Total All Roads	825,953	834,670	814,897
Commodities			
Grain and grain products	43,621	47,768	45,396
Live stock	17,953	16,501	15,336
Coal	159,749	170,100	153,485
Coke	13,359	14,473	13,429
Forest products	42,101	41,787	46,291
Ore	75,318	83,338	82,676
Merchandise l.c.l.	99,956	93,242	79,278
Miscellaneous	373,896	367,461	379,006
September 9	825,953	834,670	814,897
September 2	898,450	901,075	887,960
August 26	905,724	904,057	899,405
August 19	887,446	891,340	869,434
August 12	896,172	887,164	868,845
Cumulative Total, 37 Weeks	30,716,909	29,698,317	30,439,298

In Canada.—Carloadings for the week ended September 9 totaled 65,928, as compared with 73,136 for the previous week, and 63,365 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
Sept. 9, 1944	65,928	35,739
Sept. 2, 1944	73,136	37,713
Aug. 26, 1944	72,595	37,219
Sept. 11, 1943	63,365	39,472
Cumulative Totals for Canada		
Sept. 9, 1944	2,495,664	1,382,756
Sept. 11, 1943	2,333,391	1,438,797
Sept. 12, 1942	2,303,336	1,210,432

Senate Passes Highway Bill

The Senate on September 15 passed an amended version of S.2105 which had been on its calendar since it was reported from the committee on post offices and post roads on August 22. The approved bill cuts the total authorized appropriations from $1,950,000,000 to $1,350,000,000, providing for the expenditure of $450,000,000 (instead of $650,000,000) for each of the first three years following the war's end.

Other changes from the bill as originally reported eliminate proposals for use of federal funds in purchasing land for rights-of-way; and reject the 60-40 proposal in favor of continuing the present 50-50 basis for the matching by states of the federal funds. Also changed is the provision relating to the use of federal funds for the elimination of grade crossings. That provision now stipulates that no less than 10 per cent of any funds appropriated to any state for projects on the federal-aid highway system shall be used unmatched for the elimination of crossing hazards, provided the railway or railways involved pay not less than 15 per cent of the construction cost of such projects.

The latter requirement was the subject of considerable discussion which brought out the committee's view that the railroads should make that much of a contribution for the benefits accruing to them as a result of the crossing eliminations. As Senator Reed, Republican of Kansas, put it, the 15 per cent "was selected by the committee as the highest percentage of participation we could hope to obtain from the railroads and still have grade-crossing separations."

The approved bill also contains a provision to the effect that states found by the Federal Works Administrator to be unable to match the federal funds allocated them shall nevertheless receive such allocations, if the Administrator also finds that they have not been "diverting" to non-highway uses any funds collected by "special taxes on motor vehicle transportation."

I. C. C. Would Prescribe Safe Heaters for Buses

Because complaints and accident reports "disclose that the use of unsafe heaters or heating equipment in motor vehicles used in transporting passengers has resulted in fires which caused property damage and endangered lives," the Interstate Commerce Commission has reopened its Ex Parte No. MC-4 proceeding for further hearing with a view to adopting and prescribing heater specifications. The reopening order of September 13 includes a set of proposed specifications, and it assigns the matter for hearing before Examiner John T. McHale in Washington, D. C., on October 17.

Would Spend $20 Million a Year for Aids to Air Navigation

Annual appropriations of approximately $20,000,000 a year "will be required to be expended over each of the next several years for the construction of new and additional aids to air navigation" in continental United States according to a House interstate commerce subcommittee which follows through to recommend that the "necessary appropriation" by Congress be granted. The subcommittee is headed by Representative Bulwinkle, Democrat of North Carolina, and its report, making the foregoing finding and recommendation, is in response to House Resolution 307 which called for a study of "present and probable future conditions and developments in and affecting air

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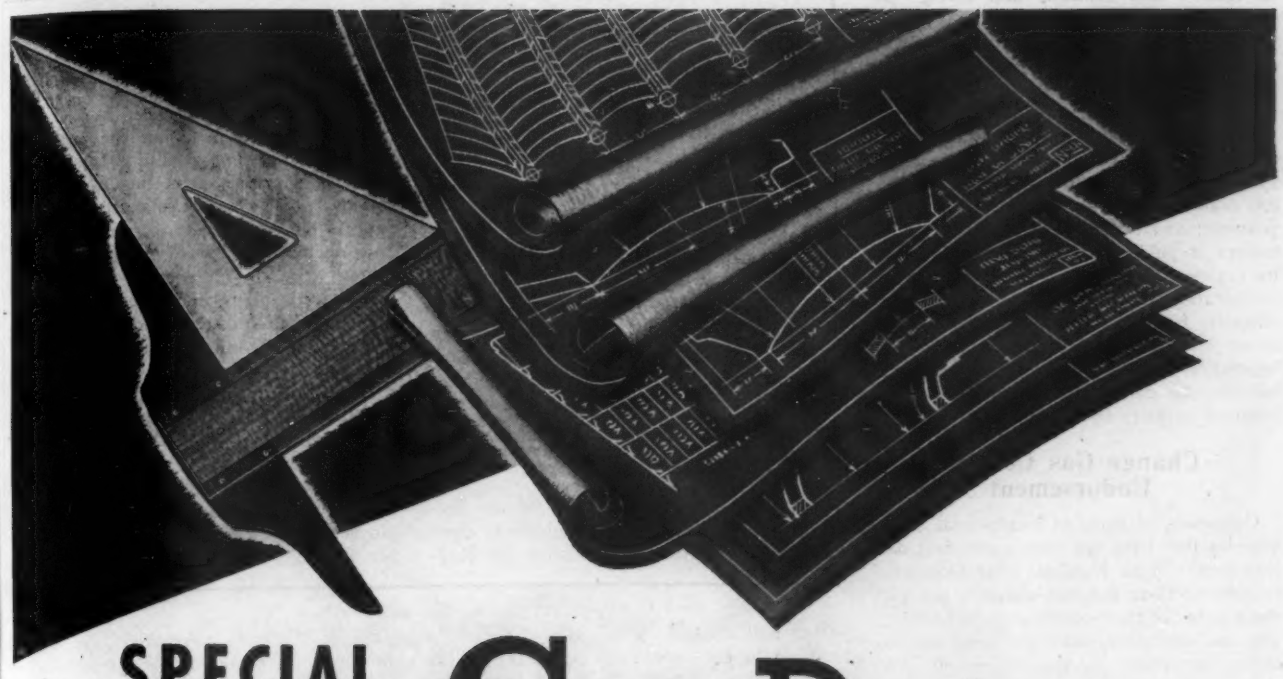
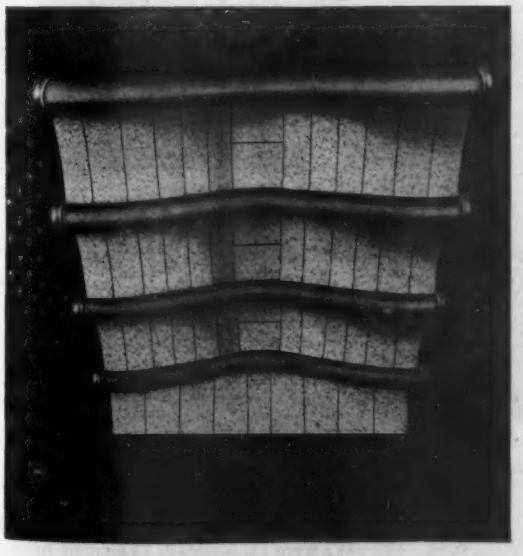


SPECIAL BRICK SHAPES WOULD BE A NUISANCE TODAY



The initial standardization of Arch Brick shapes and sizes and Arch tube spacings was the work of the American Arch Company.

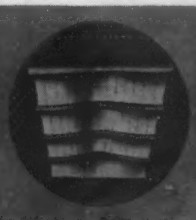
It is a work that goes forward constantly and saves the Stores and Mechanical Departments a vast amount of trouble.

The easiest solution to meet a locomotive arch difficulty is to call for a special brick shape. This the American Arch Company is willing to do only as a last resort. Over 50% of all Arch Brick is covered by 6 separate patterns.

The insistence of American Arch Company on adhering to standards has simplified the work of the Storekeeper and Maintenance Man. It is of particular significance in these war days.

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.

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Locomotive Combustion Specialists

navigation and domestic and foreign air commerce."

Other recommendations include those suggesting that weather stations established by the Army Air Forces be continued in operation after the war under the United States Weather Bureau; that immediately there be planned a comprehensive national system of high-capacity airports, and that the plan be carried out as soon as it is possible; and that the operation of control towers at public airports be taken over in its entirety by the Civil Aeronautics Administration and that Congress appropriate adequate funds for this purpose in the interest of safety. Recommendations for legislation "that is immediately necessary" include one calling for the regulation of contract carriers by air.

Change Gas Coupon Endorsement

Operators of fleets of commercial motor vehicles that have not been given fleet designations will be required after October 1 to endorse their gasoline coupons, not with the number of their certificate of war necessity, as heretofore, but with name and address, according to the Office of Price Administration. The change is made, it was said, to facilitate tracing of such coupons.

Suggests Gun Stabilizer for Passenger Cars

The gyroscopic tank-gun stabilizer that is giving American tankmen a decisive offensive advantage over the tanks of the enemy was recently described and put through its paces at Westinghouse's Springfield, Mass., plant, by Clinton R. Hanna, the company's research engineer who invented it. The highly sensitive gyro stabilizer holds the gun in its aimed position despite the pitching and rolling of the tank.

"Until the Army adopted the stabilizer in 1941," Mr. Hanna said, "it was accepted military form for half of a group of tanks to stop and fire, then advance while the other half stopped. Under this system only half of the guns could fire at one time. This was true of all tanks, whether they were the enemy's or the Allies'. It was necessary for the tanks to halt because they could not fire accurately while in motion."

When one of the stabilizers—powered by a gyroscope small enough to be held in the hand—is fixed to a tank gun, it holds the gun in position on the target even though the tank itself is plunging over foxholes, slamming into gullies and shell holes, or climbing hills.

Clinton R. Hanna, Inventor of the Gyro-Stabilizer, with One of the Early Control Units Which Employed Two Gyros Instead of One

An M-4 Medium General Sherman Tank, Equipped With a Gyro Stabilizer

The gyro control consists of a tiny motor-driven gyroscope attached to the gun mount. As the elevation of the gun starts to change, due to pitching of the tank, electrical contacts in the control element move magnet valves which admit oil at 200 lb. pressure into opposite ends of a cylinder. The piston in the cylinder, attached to the gun by a piston rod, tilts the gun at an angle approximately equal and opposite to the tilt or pitch of the tank. Actually, the angular movement of the gun is reduced to about 1/20th. The apparatus required is divided into three units, the gyro control, the actuating cylinder, and the twin gear pump unit which includes the tester type magnet valve and oil reservoir.

It has been suggested that a similar device might be used to improve the riding quality of railway passenger cars. Such devices would require about three horsepower per car for their operation.

60,000 Express Employees in Training Program

The Railway Express Agency has in operation a program of employee education—in the pursuit of which 60,000 expressmen have each put in two hours monthly at class sessions alone during the past eight or nine months.

Each class session is devoted to some subject of importance in the efficient conduct of the express business. Before each such session the participating supervisors get together and discuss the subject among themselves, the better to present it at the session. After the sessions, each supervisor holds meetings of employees under his direct supervision, interpreting to them in terms of the local situation the principles set forth in the company's "training bulletins."

On entering the service of the Express Agency each new employee is given a booklet entitled "Handbook for Railway Express Employees," which contains a word of welcome from President Head, and provides answers to a large variety of questions about the express business — working conditions, pension and pass privileges, group insurance, vacations; plus a brief explanation of the express business—what its services are, how operated, and how to avoid accidents.

Elaborate plans were necessary for the inauguration of the training program —involving the selection and schooling of leaders, the provision of meeting rooms, the preparation of educational material. Characteristic employee reaction is reported to be: "Why didn't we start this years ago?" A marked benefit which has resulted from the sessions has been a "wealth of suggestions" from employees—of which a considerable number are being put into actual use.

North Western Station Agent Buys $38,825 Worth of Bonds

Ross L. Oglesby, 54-year-old station agent of the Chicago & North Western at Beaman, Iowa, has purchased $38,825 worth of war bonds thus far. During the last war bond drive, he became so concerned over the town meeting its quota of $6,000 that he purchased $10,000 worth of bonds. In addition to working as station agent, Mr. Oglesby engages in civic activities and real estate operations and owns a 320-acre farm near Beaman.

Atlantic States Shippers Will Meet in New York, October 5

Judge R. V. Fletcher, vice-president, Association of American Railroads, will discuss recent developments in transportation when he appears as guest speaker at a joint luncheon of the Atlantic States Shippers Advisory Board and the Traffic Club of New York, at Hotel Commodore, New York, October 5.

At the morning business session of the Shippers Board, there will be a talk by Warren C. Kendall, chairman of the Car Service Division, A. A. R., presentation of reports by the executive, the commodity, and freight loss and damage prevention committee, as well as election of the nominating committee.

Revelle W. Brown, president of the Reading, will address the afternoon session, reporting for the railroad contact committee of which he is chairman. Activities of the freight car efficiency, the legislative, the emergency port transportation,

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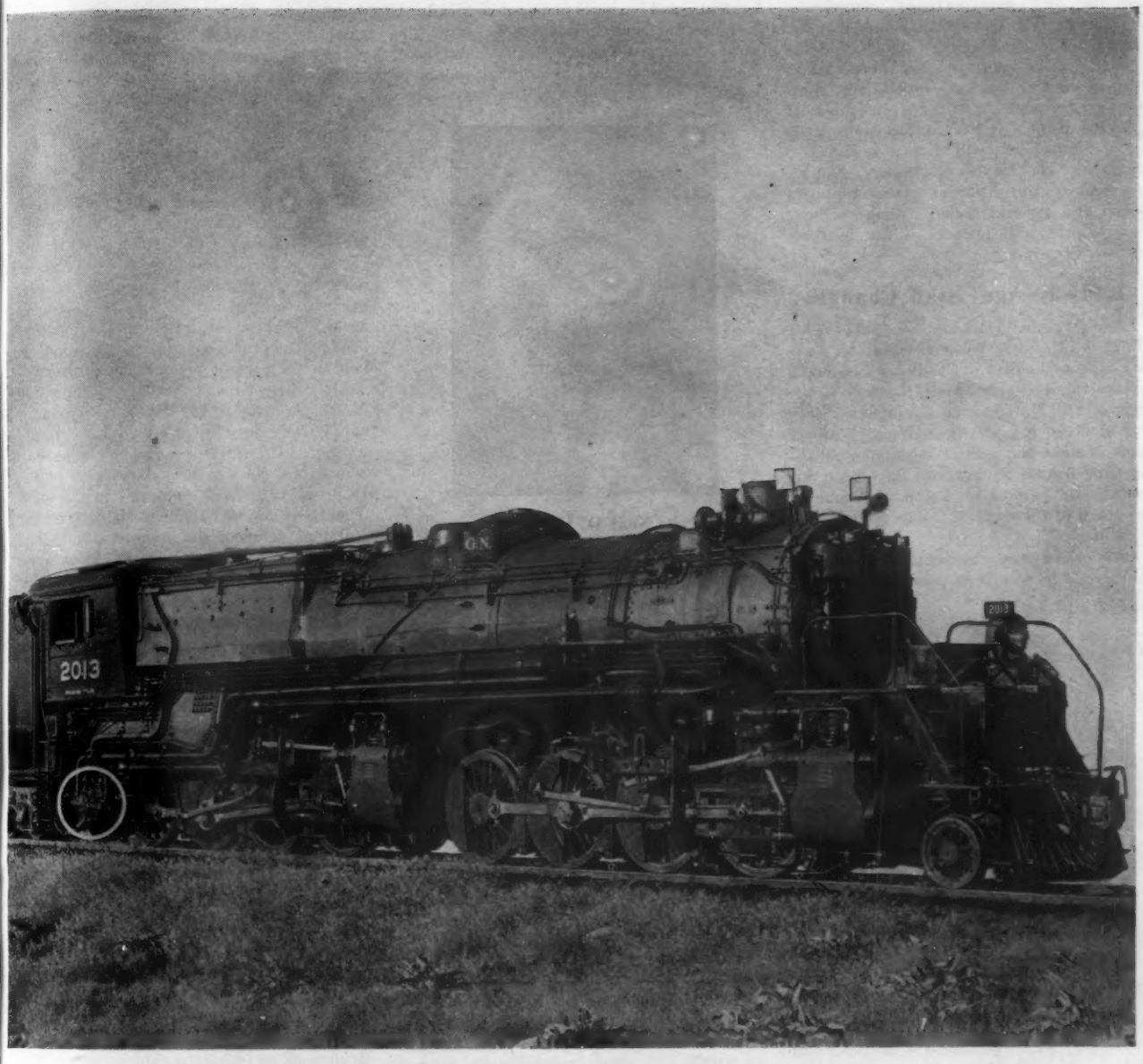

Increases Boiler Capacity

Boiler feedwater preheated with exhaust steam is not only economical, but provides added boiler capacity.

The Elesco exhaust steam injector is most efficient in producing these results. An added feature of this injector is the automatic changeover to live steam, when locomotive throttle is closed, thereby insuring heated feedwater to boiler *at all times*

KEEP ABREAST OF FEEDWATER HEATER DEVELOPMENT WITH ELESCO

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SUPERHEATERS • FEEDWATER HEATERS
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and the l.c.l. transportation committees will also be reported upon. Frank E. Guy, general traffic manager, Universal Atlas Cement, will speak on the combination form of unit of lading, waybill and shipping order, and A. P. Stevens, district manager of the Car Service Division, A. A. R., in New York, will give a report.

Charles H. Vayo, Rochester, N. Y., president of the Atlantic States Shippers Board and general traffic manager, Eastman Kodak, will preside at the business session.

"Railway Age" Staff Changes

Following the death on September 1 of Elmer T. Howson, western editor of *Railway Age*, and editor of "Railway Engineering and Maintenance" and "Railway Engineering and Maintenance Cyclopedia," several changes in the editorial and business staffs of these Simmons-Boardman Publishing Corporation publications have been announced by Samuel O. Dunn, chairman of the board of the company. The changes are as follows:

Charles Layng, transportation editor of *Railway Age*, has been promoted to west-

Charles Layng

ern editor, with headquarters as before at Chicago; Neal D. Howard, engineering editor of the *Railway Age* and managing editor of "Railway Engineering and Maintenance," continues as engineering editor of the *Railway Age*, and has been advanced to editor of "Railway Engineering and Maintenance," with headquarters as before at Chicago; Merwin H. Dick, eastern editor of "Railway Engineering and Maintenance," and eastern engineering editor of *Railway Age*, with headquarters at New York, becomes managing editor of "Railway Engineering and Maintenance," and western engineering editor of *Railway Age*, with headquarters at Chicago; John S. Vreeland, associate editor of "Railway Engineering and Maintenance" and of *Railway Age*, with headquarters at Chicago, becomes eastern editor of the former and eastern engineering editor of the latter publication, with headquarters at New York; C. Miles Burpee, purchases and stores editor of *Railway Age*, also becomes editor of the "Railway Engineering and Maintenance Cyclopedia," with headquarters as before at Chicago; S. W. Hickey, sales representative at Chicago, has been advanced to western manager, advertising sales, of the railway publications, and business manager of "Railway Engineering and Maintenance," with the same headquarters, and C. W. Merriken, sales representative, has been promoted to business manager of the "Railway Engi-

Neal D. Howard

neering and Maintenance Cyclopedia," with headquarters as before at Chicago.

Mr. Layng worked in various capacities in the traffic, mechanical and operating departments of the Southern until 1922, when he became associate editor of the "Railway Review" at Chicago. In 1923 he was promoted to assistant managing editor and three years later he was advanced to managing editor. In 1926, when the Simmons-Boardman Publishing Corporation took over that publication and consolidated it with *Railway Age*, Mr. Layng was appointed transportation editor. During his years with the latter journal he has been loaned as an economist to the Western Association of Railway Executives and has also done considerable research work for the Association of American Railroads.

Mr. Howard was born at Rochester, N. Y., on December 23, 1898, and received his higher education at Rensselaer Polytechnic Institute, from which he was graduated in 1922 with the degree of C. E. Immediately following graduation he entered the service of the Illinois Central on its St.

C. Miles Burpee

Louis division, as a chainman, with headquarters at Carbondale, Ill., and on June 4, 1923, he was promoted to rodman, with the same headquarters. During his service on the Illinois Central, which extended until August 15, 1924, Mr. Howard was engaged in both construction and maintenance of way work, and made many performance studies of gang organizations and of units of work equipment. On the latter date, he left the road to become associate editor of the 1926 edition of the "Railway Engineering and Maintenance Cyclopedia," with headquarters at Chicago, and in August, 1926, he was appointed eastern engineering editor of the *Railway Age* and eastern editor of "Railway Engineering and Maintenance," at New York, where he was located until 1938, when he was promoted to engineering editor of the *Railway Age* and managing editor of the latter publication, with headquarters at Chicago, the positions he held at the time of his new appointment.

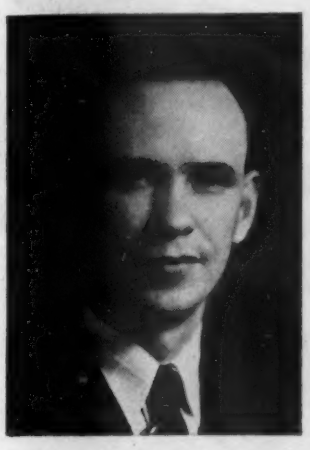
Mr. Burpee was born at Edmonston, N. B., on August 18, 1900, and was graduated from the University of New Brunswick in 1923. His first railway experience was gained during the summers of 1918 to 1920, when he was employed in the maintenance of way department of the Canadian National. During the summers of 1921 to 1923 he was employed by the department of public works of the Province of New

Merwin H. Dick

Brunswick as resident engineer on highway construction. In the following year he was associated with Marquette University, Milwaukee, Wis., as instructor of surveying, descriptive geometry and drawing. On July 1, 1924, he entered the employ of the Delaware & Hudson as bridge and building supervisor on the Pennsylvania division, and later served in the same capacity and as track supervisor on the Susquehanna division. In 1928, he was appointed bridge and building master of the Saratoga division, and in April, 1930, he was promoted to purchasing engineer. In May, 1933, he was advanced to research engineer in the purchasing department, with headquarters at Albany, N. Y., his duties consisting of the application of research in connection with the purchase and use of materials as well as the purchase and supervision of inspection of all forest products. In 1938 he resigned from the D. & H. to become managing editor of the "Railway Engineering and Maintenance Cyclopedia," and in August, 1943, he was appointed purchases and stores editor of *Railway Age*.

Mr. Dick was born on August 19, 1906, at Newton, Kan., and was educated at the University of Kansas, graduating in 1928

with a Bachelor of Science degree in civil engineering. He first entered railway service in 1924 as a chainman on the staff of the division engineer of the Atchison, Topeka & Santa Fe at Newton and during ensuing



John S. Vreeland

summer vacations he served as a chainman and rodman at this point, at Arkansas City, Kan., and at Chanute, Kan. After graduation he returned to this company as a rodman, which position he held until October, 1929, when he resigned to go with the Simmons-Boardman Publishing Corporation as associate editor of the *Railway Age* and of "Railway Engineering and Maintenance" with headquarters at Chicago. In 1937 he was promoted to eastern editor of "Railway Engineering and Maintenance" and eastern engineering editor of *Railway Age*, with headquarters at New York.

Mr. Vreeland was born on November 16, 1907, at Cincinnati, Iowa, and received his higher education at Iowa State College, Ames, Iowa, from which he was graduated in 1928 with the degree of bachelor of science in chemical engineering. His railroad career, all of which has been with the Rock Island, started in June, 1926. He worked that summer and also the following

S. W. Hickey

summer in the engineering department of that road between terms at school. Following graduation from college in 1928, Mr. Vreeland was appointed a rodman on the Rock Island with headquarters at Cedar Rapids, Iowa. He was later promoted to instrumentman and worked on the Iowa division and on the construction and location of the Coburn-Birmingham line, with headquarters at Polo, Mo. In June, 1931, he was appointed inspector, checking the joint facility accounts of that road with the Chicago, Burlington & Quincy. In October of that year he was transferred to the Missouri division, with headquarters at Trenton, Mo. In June, 1933, Mr. Vreeland was appointed a track supervisor, which position he held successively on the Oklahoma division at Booneville, Ark., on the Iowa division at Des Moines, Iowa, and on the Missouri-Kansas division, with headquarters at Eldon, Mo. In May, 1938, he became associated with the Simmons-Boardman Publishing Corporation as associate editor of "Railway Engineering and Maintenance" and of *Railway Age* at Chicago, the position he held at the time of his new appointment.

Mr. Hickey was born at Camden, Ark., on December 7, 1905, and received his higher education at the University of Arkansas. He entered railroad service in April, 1925, as a gravel and ballast inspector of the Illi-

C. W. Merriken

nois Central, subsequently serving as a rodman, chainman and valuation accountant of the same road. In April, 1931, Mr. Hickey became associated with the Simmons-Boardman Publishing Corporation as a member of the circulation department at Chicago, and in December, 1936, he was advanced to sales representative, the position he held at the time of his new appointment.

Mr. Merriken was born at Baltimore, Md., on August 12, 1907, and received his higher education at the University of Illinois. He entered railway service in 1930 as a chainman of the Chicago & North Western, and one year later he went with the Chicago, Milwaukee, St. Paul & Pacific, as a rodman at Chicago. From 1932 to 1935 he was associated with the sales department of the Pure Asphalt Company at Chicago, and in the latter year he returned to the North Western as a rodman of the Galena division. In March, 1938, Mr. Merriken went with the Belt Railway of Chicago as a rodman and in October of the same year he resigned to become an associate editor of the "Railway Engineering and Maintenance Cyclopedia." On March 4, 1940, he was appointed to the position he held at the time of his new promotion.

Safety Congress to Be Held at Chicago, October 3-5

The thirty-third national safety congress and exposition of the National Safety Council, Inc., will be held at Chicago on October 3-5 with the Steam Railroad section convening each afternoon at the Morrison Hotel. The program of the Steam Railroad section is as follows:

Tuesday Afternoon
October 3

2:00 Annual Report
General Chairman, H. A. Daake, supervisor of safety of the Erie, Cleveland, Ohio.
2:10 Greeting from Safety Section, A. A. R.
(Speaker to be announced)
2:15 Men of Maintenance. (Sound Slide Film)
2:35 Non-Train Accidents. (Maintenance of Way and Station).
(Panel Discussion)
Discussion Leader—P. F. Buckle, superintendent of safety of the Chicago, Burlington & Quincy, Chicago.
Participants:
(To be announced)
4:00 Election of 1944-45 Officers.

Wednesday Afternoon
October 4

2:00 Address
(Speaker to be announced)
2:20 Grade Crossing Accidents
W. J. Flannigan, superintendent of safety of the Northern Pacific, St. Paul, Minn.
2:35 Trespasser Accidents
G. W. Elste, Jr., superintendent of safety of the Baltimore & Ohio, Baltimore, Md.
2:45 Non-Train Accidents. (Maintenance of Equipment and Stores).
(Panel Discussion)
Discussion Leader—C. L. LaFountaine, general safety supervisor of the Great Northern, St. Paul.
Participants:
C. M. Bowling, superintendent of safety of the Louisville & Nashville, Louisville, Ky.
G. A. Goerner, general storekeeper of the Chicago Burlington & Quincy, Chicago.
H. Rees, superintendent of motive power of the Great Northern, St. Paul.
4:00 Sound Slide Film.

Thursday Afternoon
October 5

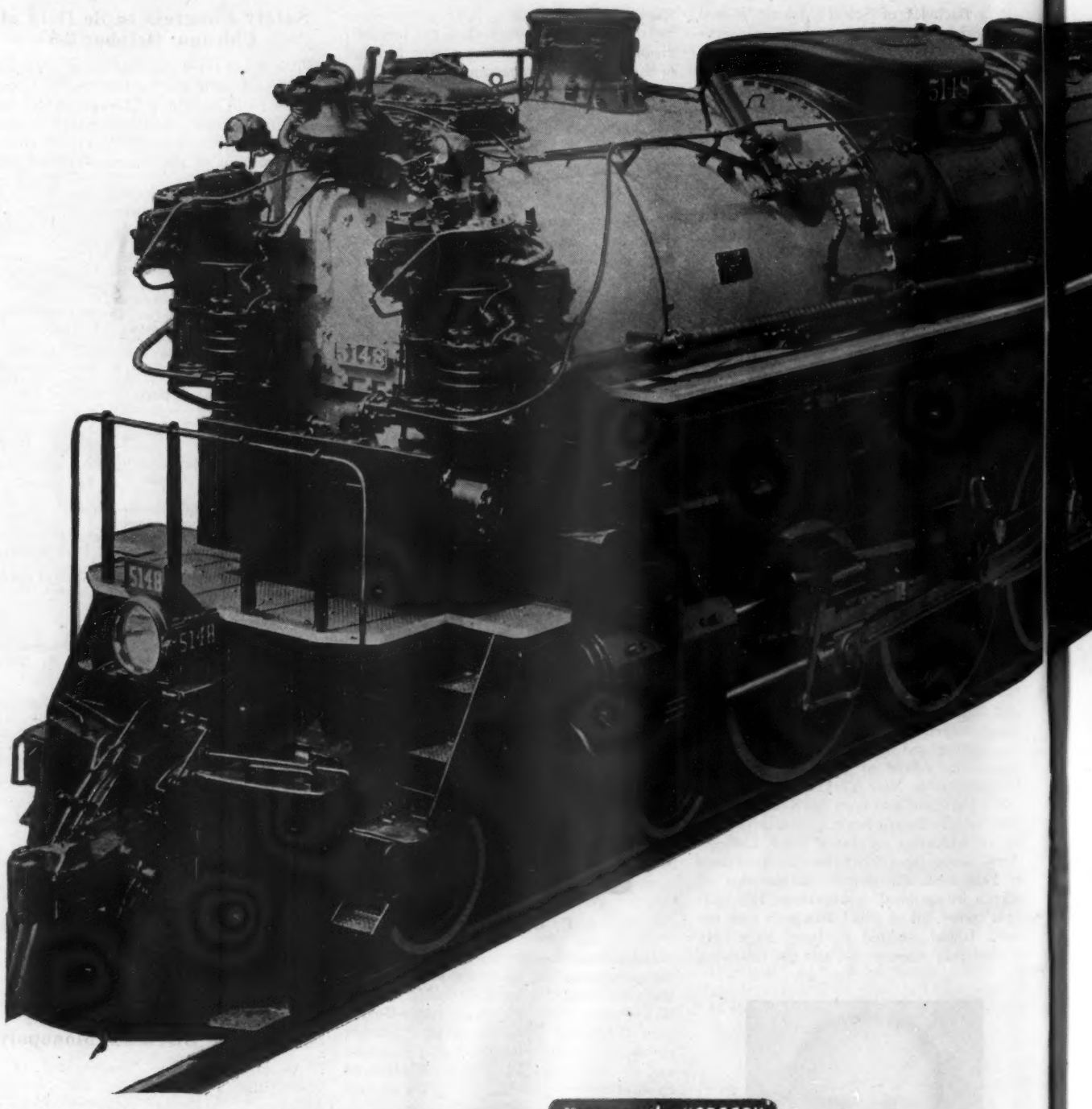
2:00 Address
Hugh A. McAllister, assistant to the president of the Erie, Cleveland
2:20 Why Risk Your Life? (Motion Picture)
Presented by—C. L. LaFountaine
2:55 Train Service Accidents (Panel Discussion)
Discussion Leader—L. E. Hoffman, inspector of operation of the St. Louis-Southwestern, Tyler, Texas.
Participants:
(To be announced)
4:15 Installation of Officers.

Mr. Berge Discusses Monopoly

Asserting that the "maintenance of a competitive economy calls for constant vigilance," Assistant Attorney General Wendell Berge on September 17 revealed in a talk broadcast through the facilities of radio station KWG at Portland, Ore., that the "collapse" of the private enterprise system can be avoided by fostering "local economic autonomy," so bringing to consumers the benefits of lower prices based on "savings in transportation."

"If local economic autonomy can be achieved," he said, "western consumers will benefit because they will be able to buy articles which do not reflect the cost of transporting raw materials from the West to the East and then back again to the West. They will not have to pay for fictitious rate charges set by a basing point system. Of course, and we might as well admit, the present basing point systems help some western firms. A few of them can operate under the umbrella which the

News Department continued on second left-hand page



EIGHT of these powerful and popular 4-6-6-4's built for the Northern Pacific were delivered last August. Four re-orders since 1936 bring the total to 47 delivered by us to the Northern Pacific alone. So effective and sturdy have they proved that 210 ALCO-built locomotives of this type have been turned out by ALCO shops.

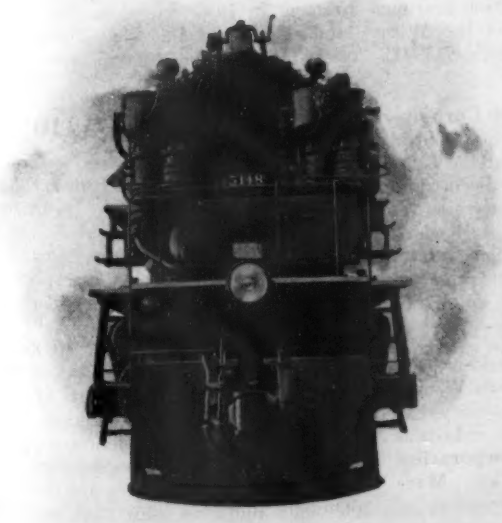
Here are the "SPECS":

Weight on Drivers	440,000 lbs.
Weight of Engine	644,000 lbs.
Cylinders (Four)	23 x 32 in.
Diameter of Drivers	70 in.
Boiler Pressure	260 lbs.
Tractive Power	106,900 lbs.
Tender Capacity–Fuel	27 tons
Tender Capacity–Water	25,000 gals.

Locomotive designs developed by American Locomotive Company have been, are, and will continue to be powerful factors in American railroad operating efficiency and economy.

LOCOMOTIVES THAT ARE MAKING HISTORY

● ***Unsurpassed for the Job because Built for the Job***



addition of a fictitious rate charge to the price of the article gives them. Even in these cases, however, the West is injured because money is taken from the consumer and it is not put to the most efficient use in order to develop western industry."

Already Mr. Berge had informed his listeners that "You will have to get freight rates down. And when you begin bargaining for freight rate reductions you will not be dealing just with individual railroads, but you will be dealing with a combination of all the western roads. They are organized from the ground up, and the organized pressure of all of them is directed against any road that is willing to reduce its rates to meet the demands of local industry."

Other "monopolies" are guilty of discrimination against the West, too, Mr. Berge said. "Eastern capital has treated the West as an economic colony from which to obtain raw materials and in which to sell the finished product after double transportation has been added. . . . Superimposed on the industrial restraints . . . are the transportation monopolies. Under the present system, the railroads haul western raw materials across the continent to be fabricated in eastern mills and hauled back to the west in the form of finished products. Wool bought at the Portland auctions in normal times goes five or six thousand miles around through the canal to Boston where it is worked up into fabrics which are, in turn, shipped by rail to Rochester or elsewhere to be tailored into suits, and shipped back west again as the latest creation of the fashion tailors. Copper from the west goes to the Connecticut valley for processing. . . ."

According to Mr. Berge, "it is not too much to say that the economic destiny of the postwar world largely will be decided by the directness and the success of public authority in dealing with national and international monopoly power."

Construction

BALTIMORE & OHIO.—This railroad has awarded a contract for bridge repairs at Patterson Creek, N. J., at estimated cost of $30,000, to the Bates & Rogers Construction Corp., of Chicago.

CHICAGO, BURLINGTON & QUINCY.—This road has completed plans for the reconstruction and enlargement of its 31st Street yard at Denver, Colo., at a cost of more than $500,000. The plans have met with the approval of the War Production Board and work will begin immediately. The project will include enlarging the yard from a capacity of 862 to 1,535 cars, construction of 13 miles of trackage, 110,000 cu. yds. of grading, construction of two bridges over the South Platte River and the installation of 111 switches. Included also will be a 22-ft. by 56-ft. brick yard office, floodlights for night illumination of the yard, a 396-ft. icing platform, and remote-control switches at the east end of the yard.

Supply Trade

a. c. f. to Double Passenger Car Capacity at St. Charles Plant

The American Car & Foundry Co. has annuounced plans to expand its passenger-train car building facilities at St. Charles, Mo., by the addition of two new one-story buildings of saw-tooth construction, covering 90,000 square feet, which will include a new coach shop, a truck and a forge shop. The plans call for 11 tracks for setting 33 passenger cars of maximum length, at one time; and transfer tables for handling cars and manufacturing equipment. Total cost of the project, which will double the present capacity of the St. Charles plant, is estimated at $1,500,000.

The St. Charles plant has been devoted almost exclusively to the building of passenger cars since 1860. It is now building 100 hospital cars for the U. S. Army and is reported to have on its books the largest volume of unfilled orders for new passenger-train equipment in its history.

Other plants of the American Car & Foundry Co. have been expanded during the war at the company's expense. About $13,000,000 has been spent for additional facilities at the company's Berwick, Pa., plant, which also will provide added capacity for passenger car construction in the post-war period.

N. J. Carbis has been appointed special railroad representative of the **Champion Rivet Company,** Cleveland, Ohio.

John B. Girdler, sales representative for the past four years, has been appointed sales manager, eastern district, for the **Vanadium Corporation of America,** with headquarters in New York.

Walter A. Furst, formerly general contract manager for the Westinghouse Electric & Manufacturing Co., has been appointed district representative in the Pittsburgh, Pa., area for the storage battery division of the **Philco Corporation.**

Howard C. Sauer has rejoined the **Timken Roller Bearing Company** as general manager of its newly-created foreign division with offices in Canto, Ohio. Mr. Sauer was chief of the anti-friction bearing section of the tools division of the War Production Board from September, 1941, to September, 1944.

The **Carnegie-Illinois Steel Corporation** (subsidiary of the United States Steel Corporation) has announced that the **Lukens Steel Company** has been licensed to manufacture "Cor-Ten", a corrosion-resisting high strength, low alloy steel which was developed by Carnegie-Illinois and, up to the present time, has been produced solely by subsidiary companies of U. S. Steel.

Leslie J. Woods, vice-president and general manager of the National Union Radio Corporation, a Philco subsidiary, has been appointed manager of the industrial radio division of the **Philco Corporation** with headquarters in Detroit, Mich. **Martin F. Shea,** who has been in charge of the Philco Corporation's Washington, D. C., office, has been appointed assistant manager of the industrial radio division.

OBITUARY

Frederick V. Gantt, district manager of the transportation division of the General Electric Company, died August 30.

Simon Hoffmann, who was sent to this country to incorporate the Locomotive Superheater Company, predecessor of the Superheater Company, by Dr. Wilhelm Schmidt, inventor of the Schmidt locomotive superheater, died at Berkeley, Cal., on September 8. He was 69 years of age. Mr. Hoffman was graduated from the Vienna, Austria, technical college. He began his career as a steam locomotive designer in Breslau, Germany, and subsequently was employed by the American Locomotive Company in its Schenectady, N. Y., plant. He returned to Europe in

Simon Hoffmann

1904 to collaborate with Robert Garbe, an official of the German State Railroads, in writing a textbook on steam locomotives. He subsequently was employed by Dr. Schmidt's German company, Schmidt'sche Heissdampf Gesellschaft, as Berlin representative and continued in that capacity until 1909 when he was sent to New York to incorporate the Locomotive Superheater Company. In 1913 he returned as general manager of the German company which he headed until his retirement in 1936. He thereafter served in Holland and in the United States as a consultant of the Superheater Company for its foreign affairs.

TRADE PUBLICATIONS

"THE A. C. F. ULTRALINER."—A plastic-bound pamphlet, attractive both in color and layout, has been prepared by the American Car & Foundry Co., 30 Church Street, New York 8, descriptive of its new Ultraliner for "luxurious mass transportation." Double-page spreads show the floor plan of each type of car in the consist of the Ultraliner—a coach, a chair car, a bar lounge, a diner, and an observation car—also the arrangement of the completed cars as seen, in color, through cut-away sections of the roofs. Thes spreads are followed by other interior illustrations; cross-sectional drawings showing how the cars are built using aluminum alloy, low-alloy steel, and carbon

News Department continued on next left-hand page

YOUR NUMBER ONE ASSET . . .

— is a *working* locomotive. To *keep* it working and rolling up maximum mileage with minimum time out for repairs is the job of HUNT-SPILLER *Air Furnace* GUN IRON, the proven wear-resisting material for many vital locomotive parts. The superiority of HUNT-SPILLER *Air Furnace* GUN IRON has been established by time and railroad acceptance. *Complete* application brings greatest savings.

HSGI
Reg. U.S. Trade Mark
Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings
Finished Parts
Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings, All Shapes
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

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HUNT-SPILLER GUN IRON

Air Furnace

steel; and illustrations of exterior surfaces and construction details. The remaining pages are devoted to the Missouri Pacific "Eagle" and other earlier lightweight cars built by the American Car & Foundry Company.

Equipment and Supplies

France Seeks 74,500 Cars, 1,300 Locomotives Here

The French Supply Commission representing the provisional government of the French Republic is exploring the possibility of securing here about 74,500 new freight cars and up to 1,300 steam locomotives for the French National Railways. The freight cars include 37,000 box cars of 20 metric tons' capacity, 7,000 gondola cars of 20 metric tons' capacity, 7,000 flat cars of 40 metric tons' capacity, 3,000 tank cars and 2,500 cabooses. The locomotives sought are of 2-8-2 and 2-10-0 wheel arrangement. Contract builders have been solicited for prices on the freight cars and the 2-8-2 type locomotives, although the whole program is considered tentative at this time. War Production Board approval is necessary for materials to be allocated to the project and the board is reported to have this under consideration.

LOCOMOTIVES

The BALTIMORE & OHIO has ordered ten Mallet locomotives from the Baldwin Locomotive Works at total cost of $2,723,000. Deliveries are expected between May and August of next year. The railroad has just received delivery from Baldwin of 20 locomotives of the same type, ordered in February, 1943.

FREIGHT CARS

The ATCHISON, TOPEKA & SANTA FE is inquiring for 250 auto-box cars of 50 tons' capacity.

IRON AND STEEL

The READING has ordered 30,000 tons of rail from the Bethlehem Steel Company.

SIGNALING

The BOSTON & MAINE has contracted with the Union Switch & Signal Company to modernize and extend the present centralized traffic control system on the Rigby (Portland, Me.) and Dover territory. The contract involves the installation of new signal equipment in connection with the addition of a second track between North Berwick and Kennebunk, 12.4 miles, which will be signaled for either-direction running, completing 45 miles of double track signaled for running in either direction between Portland, Me., and Dover, N. H. The materials involve M-22A low voltage switch machines, searchlight signals, electric-switch locks, relays and housings. The new control machine will be located at Dover, N. H., and will also handle the additional functions now controlled from a second machine presently located at Dover Tower.

Financial

BALTIMORE & OHIO.—*Financial Adjustment.*—President White of this company has announced that a plan of adjustment under Chapter 25 of the Bankruptcy Act has been approved by the directors and is being drafted in definitive form for presentation to the company's security holders. In substance, the plan provides for the purchase by the R. F. C. of a new collateral note issue to mature in 1965, to refund the August 1 and November 8 notes of the company now held by R. F. C. The plan also provides for the extension of the first mortgage bonds to 1970, the extension of the Southwestern division and Pittsburgh, Lake Erie & West Virginia bonds to 1975, the extension of the Toledo-Cincinnati division bonds to 1980, and the extension of the convertible bonds to 2010. The plan provides that 60 per cent of the interest on the company's refunding and general mortgage bonds be made contingent on earnings, the change from the present fixed and contingent rates on each series of refunding and general mortgage bonds to take place on their latest interest date in 1946. The 1 per cent unsecured interest on the first mortgage 5 per cent bonds, the 1.5 per cent unsecured interest on the Southwestern division bonds and the 4.5 per cent unsecured interest on the convertible bonds is made contingent on earnings. The plan proposes the issue of new bonds in exchange for bonds proposed to be extended and modified pursuant to the plan.

The plan also provides for a capital fund of 2.5 per cent of gross railway operating revenues or $5,000,0000, less depreciation and amortization of roadway and structures charged against income during the year, whichever is the greater. A sinking fund also is provided. All bonds issued in exchange pursuant to the plan and the collateral notes will be eligible for sinking fund purchases. Sinking fund payments will be a minimum of one-half of the income available, therefore until the company's annual charges are reduced to $22,000,000; thereafter the plan provides for a reduction in the amount payable into the sinking fund out of each year's earnings.

Mr. White pointed out that when the 1938 plan was offered, the total system funded debt outstanding in the hands of the public and R. F. C. was $672,804,178 and that the total annual system charges for interest and guaranteed dividends amounted to $31,424,096. As a result of the 1938 plan and the debt reduction since its adoption, the total system funded debt in the hands of the public and R. F. C. as of August 31 was $565,764,149, a reduction of $107,040,029, despite an increase of $4,985,823 in equipment obligations. On August 31, total annual system charges for interest and guaranteed dividends amounted to $25,698,012, a reduction on an annual basis of $5,726,084 since August 15, 1938.

Bondholders, by assenting to the 1938 plan, deferred part of the interest, but all deferred interest has been paid and the position of all security holders has been materially improved by the reduction in debt and annual charges. The present plan is proposed to carry forward the policy of debt reduction further to strengthen the position of the company's security holders.

BEVIER & SOUTHERN.—*Lease.*—This road has applied to the Interstate Commerce Commission for authority to operate under lease a 6.1-mile extension of its line to the vicinity of Jacksonville, Mo., to give it access to a larger coal producing area. The trackage would be leased from the Binkley Mining Co., owner of the road's capital stock.

CHESAPEAKE & OHIO.—*Awards Equipment Trust.*—On September 14, the Chesapeake & Ohio awarded, subject to Interstate Commerce Commission approval, a $2,500,000 issue of serial equipment trust certificates of 1944 to Halsey, Stuart & Co., and associates, on a bid of 99.75 for 1¾ per cent obligations, an interest cost basis to the company of approximately 1.80 per cent. The certificates will be dated September 15, 1944, and will mature in ten equal annual installments of $250,000 each. Proceeds are to be used to finance in part the purchase of 1,250 50-ton all-steel hopper cars, to cost approximately $3,221,950.

CHESAPEAKE & OHIO.—*Equipment Trust Certificates.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for $2,200,000 of its fifth equipment trust of 1944 certificates, to be issued in connection with the purchase, at a cost of about $2,811,828, of ten 2-6-6-6 type freight locomotives. Bids on the certificates, which will be dated October 1, 1944, will be received by the railroad until September 28.

Division 4 of the commission has authorized this company to assume liability for $2,500,000 of its third equipment trust of 1944 1¾ per cent equipment trust certificates, sold at 100.1 to the New York Trust Co., in connection with the purchase of 1,250 all-steel 50-ton hopper cars at a total cost of about $3,241,812.

CHICAGO & NORTH WESTERN.—*Awards Equipment Issue.*—The Chicago & North Western has awarded its $5,180,000 of equipment trust certificates of 1944 to Halsey, Stuart & Co., and associates, on a bid of 99.229 for the issue, an interest rate of 1¾ per cent for maturities running from one to ten years. The certificates were reoffered to the public at prices to yield from 0.90 to 2.10 per cent according to maturities. (Previous item in *Railway Age* of August 19.)

DELAWARE & HUDSON.—*Merger.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire control of the Rensselaer & Saratoga and to merge that company's properties into its own. In this connection, modification of the leases under which the D. & H., as assignee, operates the properties of the Saratoga & Schenectady, the Albany & Vermont, and the Rutland & Whitehall, also was approved. To finance the transaction, the D. & H. has been authorized to issue a temporary promissory note for $8,729,200, the proceeds to be applied against the purchase of an equal principal amount of R. & S. general mortgage bonds,

the issue of which was at the same time approved. In exchange for these bonds, to be guaranteed by the D. & H., the latter is to acquire an equal par value of R. & S. stock, or cash obtained from the sale thereof is to be applied to the purchase of stock not offered for exchange. In addition, the issue of $1,852,000 of R. & S. first mortgage 4 per cent bonds was also authorized.

DELAWARE, LACKAWANNA & WESTERN.—*Merger.*—Division 4 of the Interstate Commerce Commission has authorized the merger of the Lackawanna of New Jersey into the Delaware, Lackawanna & Western, and in that connection has authorized the latter to issue $7,935,000 of series A (fixed interest) and $2,645,000 of series B (contingent interest) Lackawanna of New Jersey division first mortgage 4 per cent bonds to be exchanged for stock of the New Jersey company. The transaction is a part of a program for the simplification of this system's corporate structure through elimination of leased line companies, which is expected to effect a reduction in fixed charges and settlement of complex tax litigation.

ERIE.—*Bonds.*—This road has modified the terms of its invitation for bids for the purchase of $13,000,000 of first consolidated mortgage bonds, series E, and of its application to the Interstate Commerce Commission for authority to issue such bonds. Instead of allowing the interest rate to be fixed through competitive bidding, it has been set as 3¼ per cent, and provision has been made for a sinking fund in connection with the issue. (Previous item in *Railway Age* of September 16, page 458.)

GULF, MOBILE & OHIO.—*Awards Bond Issue.*—The Gulf, Mobile & Ohio has awarded, subject to Interstate Commerce Commission approval, its $10,500,000 issue of first and refunding mortgage 3¼ per cent bonds, series D, to a banking group headed by Shields & Co. on a bid of 97.20. The bonds, which will be dated October 1, 1944, and mature October 1, 1969, were reoffered to the public at 98¾. Proceeds from the sale, together with treasury cash, will be used to redeem on or before January 1, 1945, the $2,000,000 issue of publicly held 3¼ per cent collateral trust bonds, series A, due July 1, 1953, and the entire $8,600,000 issue of 4 per cent collateral trust bonds, series B, due July 1, 1958, now held by the Reconstruction Finance Corporation. (Previous item in *Railway Age* of September 9.)

KANSAS CITY TERMINAL.—*Bonds.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue $47,000,000 of first mortgage bonds, maturing serially over a period of 27 years, and bearing interest at rates varying from 4 per cent to 1⅞ per cent. (Previous item in *Railway Age* of September 2, page 390.) At the same time 11 proprietary roads were authorized to assume liability severally in respect of their proportionate shares of the principal and interest on these bonds. The proceeds are to be used, with other funds, to redeem $49,121,000 of outstanding first mortgage 4 per cent bonds.

MISSOURI PACIFIC.—*Payment of Interest.*—A hearing on the application of the trustee of the Missouri Pacific for payment of interest on bonds probably will be held shortly after October 13, according to Russell L. Dearmont, counsel for the trustee. Three petitions have been filed in the Federal District court in St. Louis, Mo., seeking authority to pay $13,159,525 back interest on Missouri Pacific first and refunding mortgage bonds equivalent to two six-months interest payments, also $3,425,025 interest accruals on New Orleans, Texas & Mexico first mortgage bonds and noncumulative income bonds equivalent to three six-months installments of interest, and $1,610,000 interest accruals on International-Great Northern first mortgage bonds evidencing payment of two six-months interest coupons.

NEW YORK, CHICAGO & ST. LOUIS.—*Collateral Loan.*—This road's directors, on September 19, approved a plan for refinancing. The plan calls for a 5-year collateral loan in the amount of $10,000,000, the proceeds to be used, together with $5,300,000 of treasury cash, to pay off the extended first 3½s, due October 1, 1947. The 3½s, presently outstanding in principal amount of $15,188,000, are redeemable on 30-days notice at 101. Application for Interstate Commerce Commission approval will be filed promptly and competitive bids sought for the $10,000,000 collateral loan. As soon as this loan is completed the 3½s will be called for redemption so that the debt reduction can be accomplished this year.

The plan for early retirement of the 3½s in the manner contemplated is designed to lay the foundation for a refunding operation under which it is hoped a new series of approximately $42,000,000 of low-interest-rate refunding mortgage bonds, which would then be a first mortgage on the entire system of approximately 1,700 miles, may be substituted for the $6,500,000 of first 4s of 1950, the $26,058,000 of refunding 5½s of 1974, and the $10,000,000 collateral loan. The 4s of 1950 can be redeemed at par but only upon an interest date following six months' notice. The refunding 5½s can be redeemed at 107½ on an interest date following sixty days' notice. Upon completion of the transactions now proposed, it is hoped that the $59,875,000 of refunding 4½s of 1978, which will then also be a part of the first mortgage on the entire system, can be refunded at a lower rate of interest.

PRESCOTT & NORTHWESTERN.—*Bonds.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $55,000 of 4 per cent first mortgage bonds to be delivered at par to the Missouri Pacific in exchange for an equivalent amount of matured 5 per cent bonds. At the same time, an additional $20,000 of the 5 per cent bonds will be paid with treasury funds.

NEW YORK, NEW HAVEN & HARTFORD.—*Reorganization.*—Secretary W. P. Bartel has made public as information the ballot forms and other material to be submitted about September 26 by the Interstate Commerce Commission to those classes of this road's creditors who are entitled to vote for the acceptance or rejection of the plan of reorganization approved by the commission. At the same time Division 4 of the commission denied a request made by the Pennsylvania and by the protective committee representing New Haven common stock that it defer submission of the plan to creditors to a later date. Ballots are returnable November 25.

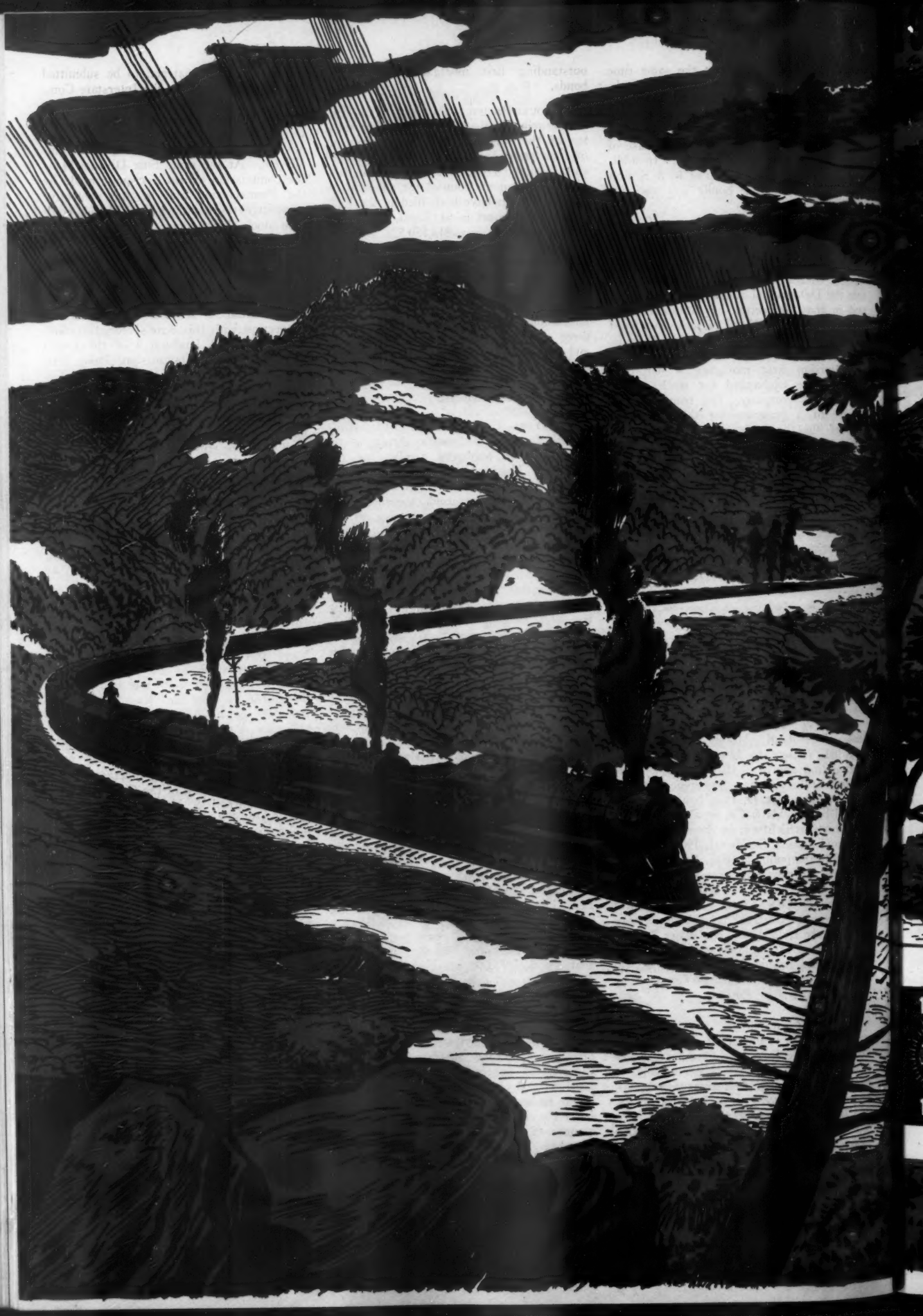
ST. LOUIS-SAN FRANCISCO.—*Reorganization Expenses.*—Maximum allowances of compensation for services and expenses in connection with this road's reorganization, as approved by Division 4 of the Interstate Commerce Commission, have been modified, insofar as the Bankers Trust Co. and its counsel are concerned, following a court order returning the division's finding for further consideration. The claims involved covered the period ended January 31, 1941. The trust company had petitioned for approval of $10,000 for its services as trustee, $10,000 for White & Case, counsel, and $6,000 for Bryan, Williams, Cave & McPheeters, counsel. The division, by order of August 27, 1941, approved maximum limits, respectively, of $2,500; $3,500; and $2,000. Upon further consideration, these limits have been set, respectively, as $4,500; $4,000; and $3,000.

TORONTO, HAMILTON & BUFFALO.—*New Directors.*—Gustav Metzman, president of the New York Central, and Harold S. Vanderbilt have been elected directors of this road to succeed F. E. Williamson, who has resigned, and the late W. K. Vanderbilt.

UNION PACIFIC. — *Oregon-Washington Bonds.*—A syndicate headed by Kuhn, Loeb & Co. has been awarded the $54,750,000 issue of refunding mortgage 3 per cent bonds, series A, of the Oregon-Washington Railroad & Navigation Co. on a bid of $102.098. The bonds, which will be dated October 1, 1944, and mature October 1, 1960, are guaranteed unconditionally by the Union Pacific. The syndicate reoffered the bonds to the public at 102⅞ and accrued interest. The Oregon-Washington will also sell to the Union Pacific $7,440,000 of refunding mortgage bonds, series B, at the price bid by the bankers for the series A bonds. Proceeds from the sale of both series, together with other funds, will be used to redeem on January 1, 1945, approximately $54,750,000 of publicly-held first and refunding mortgage bonds due January 1, 1961, and $17,444,000 owned by the Union Pacific. (Previous item in *Railway Age* of September 9.)

WEST FELICIANA.—*Issue of Securities.* This company has applied to the Interstate Commerce Commission for authority to issue 650 shares of capital stock of $100 par value and three 3 per cent promissory notes, each in the amount of $15,000, payable one, two, and three years after date to the Louisiana & Arkansas, thus complying with a requirement of the order in which the commission authorized it to purchase a branch from the L. & A.

News Department continued on second left-hand page



SMOOTHING AND SPEEDING STARTS AND STOPS

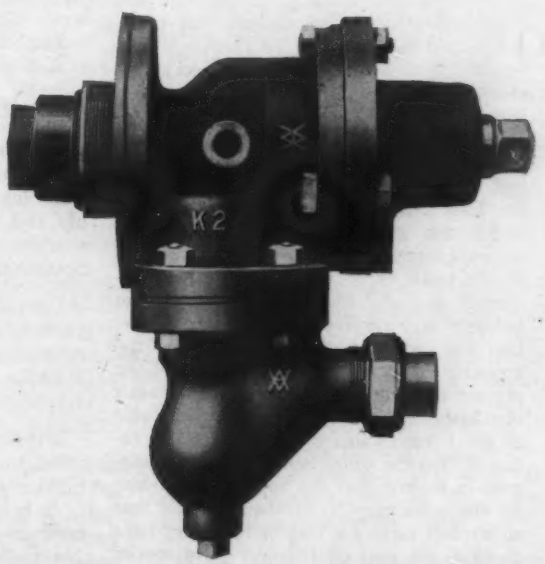
By 1907 expansion in freight train length presented new braking problems . . . and Westinghouse developed the K-Triple Valve to meet them.

Its Quick Service Feature hastened the serial action when applying the brakes with service applications. Records of road tests of that period show "in no case was the time of service application with K-Triple Valves equal to over one-half the time required to run the serial action through the train with standard triple valves."

The Retarded Release and Recharge Feature of the "K" Triple Valve also contributed in meeting the operating requirements of that period.

75 Years of Pioneering

WESTINGHOUSE AIR BRAKE COMPANY, WILMERDING, PA.



The K-Triple Valve made a vital contribution to train handling . . . and it is only one in a continuing chain of Westinghouse Air Brake developments. Throughout the past 75 years, a Westinghouse Air Brake has been ready to meet each new transportation need.

1869 1944

TO PERMIT TODAY'S TRAINS TO MOVE AT SHORTER INTERVALS WITH HEAVIER LOADS AT HIGHER SPEEDS—SAFELY.

(Previous item in *Railway Age* of September 2, page 391.)

WESTERN PACIFIC.—*Reorganization.*—This road's reorganization managers have applied to the Interstate Commerce Commission for authority to proceed with the approved plan for its reorganization, and in that connection for approval of the acquisition of new 4 per cent bonds of the reorganized company by the Reconstruction Finance Corporation.

WHEELING & LAKE ERIE.—*Trackage Rights.*—In a proposed report Examiner Jerome K. Lyle has recommended that Division 4 of the Interstate Commerce Commission should find that this road's proposal to extend its operations to Follansbee, W. Va. (East Steubenville), by trackage rights over a line of the Wheeling Steel Corp. to that point from Steubenville, Ohio, 1.97 miles, including a bridge crossing the Ohio river, is not an extension of its railroad within the meaning of section 1(18) of the Interstate Commerce Act, or alternatively, that it should not approve the proposed arrangement. The arrangement would be made for the purpose of gaining access to improved ore unloading facilities installed by the steel company at East Steubenville, and its ore unloading at Steubenville would be discontinued. The application was opposed by the Pennsylvania, which serves both Steubenville and East Steubenville, on the ground that the extension would constitute an invasion of its territory and that it is prepared to handle all the tonnage which the steel company may require to be delivered. The payments to be made to the steel company for trackage rights would, in effect, it was claimed, constitute a competitive advantage for the W. & L. E. sufficient to influence diversion of tonnage to that road, and would be unlawful because it would amount to an allowance to the steel company for service it should perform for itself.

The examiner held that, "if it were possible for the applicant to make a bona fide extension of its line of railroad to the East Steubenville area it is doubtful under the circumstances disclosed that such extension would constitute an invasion of the territory of its competitor, but inasmuch as under the proposed method the industry will receive an added compensation for each car of ore handled by the applicant a constant temptation will be present to favor that carrier. Under such circumstances it is possible that the traffic of the Pennsylvania may be materially reduced. On the other hand the record warrants a finding that the applicant may lose its entire tonnage to Steubenville and that as a result thereof it may be necessary later to close the port of Huron. [Ore moved to Steubenville by the W. & L. E. has been handled largely through the lake port of Huron, Ohio.] While this unfortunate situation is entitled to serious consideration it does not warrant the approval of a plan not in accordance with the law."

What is proposed by the W. & L. E., the examiner held, is not an extension of its common carrier rights and duties, "but the performance by a carrier of added service inside an industry plus a payment to the industry in connection therewith." While the rearrangement of the steel company's facilities may give the Pennsylvania a competitive advantage, he added, "that does not alter the fact that the movement of the traffic from the applicant's present interchange point is entirely within the industry confines and under this commission's determination in numerous cases may not be performed by the applicant without making a charge therefor."

Average Prices Stocks and Bonds

	Sept. 19	Last week	Last year
Average price of 20 representative railway stocks..	40.11	39.93	37.65
Average price of 20 representative railway bonds..	88.54	88.41	79.69

Dividends Declared

Chicago & Eastern Illinois.—Class A, $1.00, irregular, payable October 16 to holders of record September 30.

Chicago Great Western.—5% preferred, 62½¢, accum., payable September 29 to holders of record September 14.

Chicago South Shore & South Bend.—Increased quarterly and quarterly, both 30¢, payable September 15 and December 15, respectively.

Hawaii Consolidated.—7% preferred, 15¢, accum., payable September 20 to holders of record September 8.

Kansas City Southern.—4% preferred, $1.00, irregular, payable October 16 to holders of record September 30.

Mahoning Coal.—Common, $6.25; 5% preferred, $1.25, semi-annually; both payable October 2 to holders of record September 22.

Maine Central.—6% prior preferred, $1.50, accum., payable October 2 to holders of record September 22.

New London Northern.—$1.75, quarterly, payable October 2 to holders of record September 15.

Providence & Worcester.—$2.50, payable October 2 to holders of record September 13.

Abandonments

CHICAGO & NORTH WESTERN.—This company has applied to the Interstate Commerce Commission for authority to abandon a portion of a branch from Lyons, Iowa, to Anamosa, 68.2 miles.

LEHIGH VALLEY.—In a proposed report Examiner Lucian Jordan has recommended that the Interstate Commerce Commission deny the application of this company for authority to abandon operation of, and for the Loyalsock Railroad to abandon, a line from Noxon, Pa., to Splash Dam, 9.74 miles.

LOUISVILLE & NASHVILLE.—This company has applied to the Interstate Commerce Commission for authority to abandon a 1-mile segment of branch line at Chenoa, Ky.

MISSOURI PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to abandon a portion of a branch line extending 1.7 miles in a northwardly direction out of Bagnell, Mo. No traffic would be affected by the proposed abandonment which is part of a plan to relocate the Bagnell station facilities, taking them out of a flood area.

MISSOURI PACIFIC.—Division 4 of the Interstate Commerce Commission has authorized this road's subsidiary, the Missouri Pacific in Nebraska, to abandon a portion of a branch from Talmage, Neb., to Crete, 58.1 miles, effective one year after the date of the certificate, but has denied that part of the application which concerned the abandonment of another portion of the branch, extending from Talmage to a point near Auburn, 11.9 miles. Abandonment of any part of the line under present conditions was opposed by the Nebraska State Railway Commission, the Department of Agriculture, and spokesmen for farmers and shippers in the territory affected. The division found that indefinite continued operation would impose an undue burden on the road, but held that immediate abandonment would have an adverse effect on the war effort. Because of its value as a connection and alternate route, the continued operation of the line from Talmage to the vicinity of Auburn was held to be in the public interest, however.

ST. LOUIS & TROY.—Upon request of citizens of Troy, Mo., and vicinity who have purchased the securities of this road, with the intention of continuing its operation, Division 4 of the Interstate Commerce Commission has canceled the certificate previously issued authorizing abandonment of its entire line from Troy to Moscow Junction, 5.2 miles, and has dismissed without prejudice the application for permission to abandon.

Railway Officers

EXECUTIVES

Leroy V. Porter, vice-president and comptroller of the New York Central, has been named vice-president, accounting, with headquarters at New York.

James L. Hetland, whose election to vice-president of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis, Minn., was reported in the *Railway Age* of September 9, was born at Ada, Minn., on September 5, 1900, and was graduated from the Law School of the University of Minnesota in 1924. After several months' service with the firms of Kingman, Cross, Morley & Cant, and Rockwood &

James L. Hetland

Mitchell, in Minneapolis, he entered railway service on October 14, 1924, as an attorney for the Soo Line. On October 1, 1934, he was promoted to general attorney

and on September 1, 1937, he was advanced to assistant general solicitor. He was further advanced to general solicitor in December, 1938, and in August, 1940, he was promoted to general counsel, the position he held at the time of his new appointment. Mr. Hetland will retain the position of general counsel.

C. Baker Williams, southern traffic manager of the Railway Express Agency at Atlanta, Ga., has been appointed assistant to vice-president in charge of traffic, at New York. He is succeeded by **M. J. Harris,** formerly district manager, public relations, Gulf department, also at Atlanta.

Charles S. Pope, whose election to vice-president of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis, Minn., was reported in the *Railway Age* of September 9, was born on June 1, 1896, at St. Paul, Minn., and attended the University of Minnesota. He obtained his first railroad experience in the Como shops of the Northern Pacific in St. Paul. In 1917 he entered the service of the Great Northern as a clerk in the office of the auditor of freight receipts, serving in this ca-

Charles S. Pope

pacity until 1918, when he resigned to enlist in the Railway Division, Thirty-second Engineers, A. E. F. In 1919, following his return from the war, he served with various commercial concerns in St. Paul. In the following year he entered the service of the Soo Line as a clerk in the office of the auditor of disbursements, being appointed chief clerk to the assistant comptroller in 1923, and chief clerk to the comptroller in 1924. In 1926, Mr. Pope was made auditor of miscellaneous companies, and in 1928 he became assistant to the comptroller of the Soo Line. In the following year Mr. Pope became secretary and assistant to the comptroller of the Soo Line, the Duluth, South Shore & Atlantic, the Wisconsin Central, and the Spokane International and subsidiaries, with headquarters at Minneapolis. In 1932, he resigned to become auditor and treasurer for the receiver of the Wisconsin Central. Later in the same year he was appointed assistant to the trustees of the Minnesota & Ontario Paper Company and, concurrently with these appointments, he was also elected executive vice-president of the International Lumber Company, executive vice-president of the Insulite Company and to the same office in other subsidiaries of the paper manufacturing firm. In November, 1937, Mr. Pope returned to the Soo Line as executive assistant, the position he held at the time of his new appointment.

Ben H. Brown, assistant general freight agent of the Atlantic Coast Line and the Charleston & Western Carolina, with headquarters at Columbia, S. C., has been appointed assistant to vice-president, traffic, at Wilmington, N. C., succeeding **J. H. Hatcher,** who has been appointed executive general agent at Washington, D. C.

H. T. Malcolmson, vice-president and general manager of the Toronto, Hamilton & Buffalo, has been elected president succeeding **F. E. Williamson,** who has resigned because of ill-health. Mr. Malcolmson will also continue as general manager, and will have headquarters, as before, at Hamilton, Ont.

Richard E. Davies, whose promotion to executive assistant of the Minneapolis, St. Paul & Sault Ste. Marie (Soo Line), with headquarters at Minneapolis, Minn., was reported in the *Railway Age* of September 16, was born at Cambria, Wis., on March 24, 1882, and entered railway service on July 1, 1904, as a freight clerk of the Soo at Minneapolis. He subsequently served in various capacities at that point until September 1, 1918, when he was advanced to trainmaster, with headquarters at Enderlin, N. D. In the same year Mr. Davies was promoted to chief clerk in the office of the federal manager, and later served in a similar capacity for the vice-president and the president at Minneapolis. On July 1, 1938, he was advanced to assistant to the president, and in 1944 he was appointed assistant to the former trustees, the position he held at the time of his new promotion.

FINANCIAL, LEGAL AND ACCOUNTING

Harold A. Smith of the Chicago law firm of Winston, Strawn & Shaw has been appointed acting general counsel of the Chicago, Indianapolis & Louisville, with headquarters at Chicago.

Clyde West, assistant treasurer of the Missouri-Kansas-Texas, with headquarters at Dallas, Tex., has been promoted to treasurer, with the same headquarters, succeeding **E. T. Nelson,** whose death on July 12 was reported in the *Railway Age* of July 29.

Edward A. Clancy, assistant comptroller of the New York Central, has been appointed comptroller, with headquarters at New York. Mr. Clancy succeeds **Leroy V. Porter,** whose appointment as vice-president, accounting, is announced elsewhere in these columns.

OPERATING

J. E. Brennan has been appointed trainmaster, Buffalo division, of the New York Central.

W. J. Arnett, assistant trainmaster of the Illinois Central, with headquarters at Good Hope, La., has been promoted to trainmaster of the Shreveport district, with headquarters at Vicksburg, Miss., succeeding **S. J. Massey, Jr.,** who has been transferred to the Louisville, Owensboro and Hodgenville districts, with headquarters at Louisville, Ky.

Sherman Smith, superintendent of the Calgary division, Canadian National, has retired after 34 years of service.

J. A. Lacasse has been appointed acting trainmaster of the Laurentian division of the Canadian National with headquarters at Chauvigny, Que.

F. E. Peake, trainmaster of the Alamosa division of the Denver & Rio Grande Western, with headquarters at Durango, Colo., has retired after 53 years of service.

A. McFatridge, assistant trainmaster of the Southern at Princeton, Ind., has been promoted to trainmaster, with the same headquarters. The position of assistant trainmaster has been abolished.

F. E. Taylor, whose appointment as superintendent of the Shenandoah division, Norfolk & Western, was announced in the *Railway Age* of September 2, was born at Christiansburg, Va., on October 8, 1894.

F. E. Taylor

He entered the service of the Norfolk & Western on September 9, 1910, as a checker, becoming yard clerk at Wilcoe, W. Va., in 1919, and assistant yardmaster at that location five years later. Mr. Taylor then served successively as yardmaster, general yardmaster, assistant trainmaster, and trainmaster at Cincinnati, Ohio. He became assistant superintendent of the Scioto division on February 1, 1944, continuing in that post until his recent promotion to superintendent of the Shenandoah division at Roanoke.

W. C. Smith, acting general manager of the Detroit Terminal Railroad Company, has been promoted to general manager and chief engineer, with headquarters as before at Detroit, Mich.

Ralph L. Simpson, assistant to the former receiver of the Wisconsin Central (part of the Minneapolis, St. Paul & Sault Ste. Marie), with headquarters at Minneapolis, Minn., has been promoted to general manager of the Soo Line, with the same headquarters. Mr. Simpson was born at Stratford, Ont., on December 26, 1892, and en-

News Department continued on second left-hand page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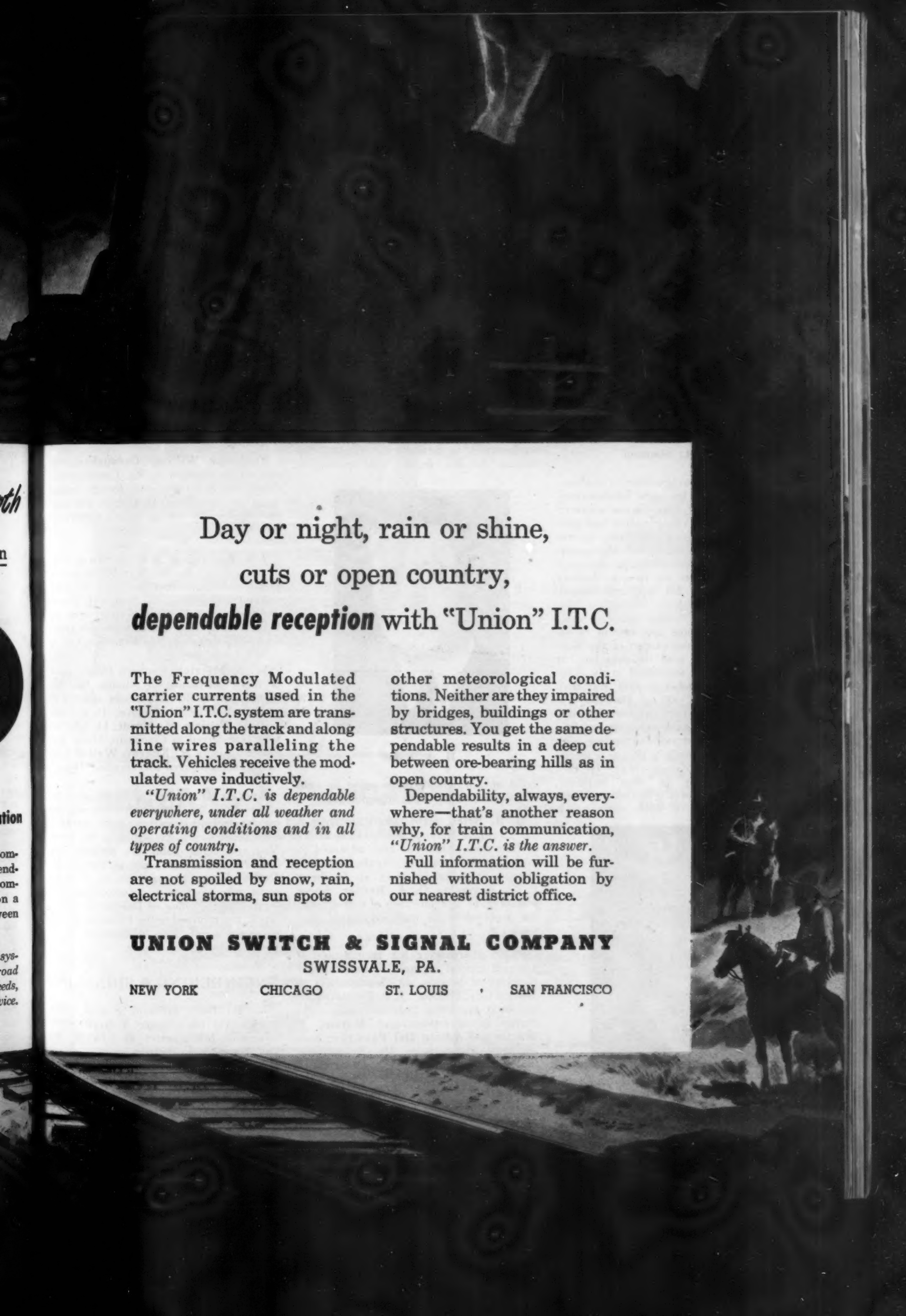
Dependable voice communication
"Union" I.T.C. (Inductive Train Communication) system provides dependable, practicable two-way voice communication between vehicles on a train, between trains, and between trains and wayside points.
It is the only train communication system designed exclusively for railroad use, by men who know railroad needs, and proved in regular railroad service.



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Dependability, always, everywhere—that's another reason why, for train communication, *"Union" I.T.C. is the answer.*

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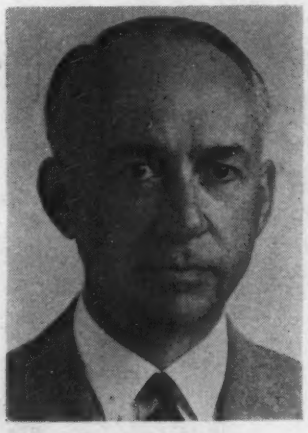
NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

tered railway service in March, 1913, as a draftsman of the Grand Trunk Pacific (now part of the Canadian National), with headquarters at Transcona, Man. In July, 1917, he went with the Soo Line as chief draftsman, with headquarters at Minneapolis, and



Ralph L. Simpson

in April, 1923, he was promoted to mechanical engineer, with the same headquarters. In March, 1937, Mr. Simpson was advanced to assistant to the vice-president and general manager, and one year later he was further advanced to assistant to the operating officer. In March, 1943, he was promoted to assistant to the receiver, holding that position until his new appointment, effective September 1.

C. P. Blair, whose appointment as superintendent of transportation of the Norfolk & Western with headquarters at Roanoke, Va., was announced in the *Railway Age* of September 2, 1944, was born on November 11, 1900, at Danville, Va. After receiving his B. S. degree in mechanical engineering from Virginia Polytechnic Institute he entered railroad service with the Norfolk & Western in 1923 as a special apprentice at the Roanoke shops. He then served successively as shop inspector, Scioto and Pocahontas divisions, and auto-

C. P. Blair

matic train control mechanic, valuation man, and shop engineer at Roanoke. Thereafter he became assistant road foreman of engines of the Radford and Norfolk divisions, and assistant trainmaster, Shenandoah division, later being promoted to trainmaster of the Pocahontas division. He was appointed assistant superintendent of the Scioto division in 1941 and advanced to superintendent of that division on January 1, 1942, in which capacity he served until he received his new position as superintendent of transportation with headquarters at Roanoke, Va.

H. A. Baker, whose promotion to traffic manager of the St. Louis-San Francisco, with headquarters at Springfield, Mo., was reported in the *Railway Age* of September 2, was born at New York on August 10, 1904, and was graduated from the University of Kansas in 1927. He entered railway service in October of that year as a diversion clerk of the Frisco at Kansas City, and one year later he was advanced to soliciting freight and passenger agent, with headquarters at Wichita, Kan. In 1932 Mr. Baker was promoted to general agent at Wichita, and in 1936 he was appointed assistant general agent, with headquarters at Springfield. In 1942 he became division freight and passenger

H. A. Baker

agent at Springfield, the position he held at the time of his new appointment.

G. B. Brien, night chief dispatcher of the Canadian National, with headquarters at Edmonton, Alta., has been advanced to assistant superintendent of the Smithers division, with headquarters at Smithers, B. C., succeeding **C. A. Berner,** whose promotion to superintendent of that division was reported in the *Railway Age* of September 2.

Pablo Hernandez has been appointed assistant general manager of the National Railways of Mexico, with headquarters at Mexico City, Mexico. **J. P. Belaunzaran** has been appointed assistant manager in charge of operations, and **Manuel J. Macias** and **Adrian Del Paso** have been appointed assistants to Mr. Belaunzaran in the transportation and maintenance of way departments respectively. **Pedro Pantoja,** acting general superintendent of transportation, has been promoted to general superintendent of transportation, with headquarters as before at Mexico City. **J. I. Garcia** has been appointed assistant general superintendent of transportation.

TRAFFIC

John W. Keller has been appointed chief of the tariff bureau of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn.

W. K. Helms has been appointed assistant general freight agent of the Atlantic Coast Line, the Charleston & Western Carolina, and the Columbia, Newberry & Laurens with headquarters at Columbia, S. C.

W. E. Hooks, traveling freight agent of the Chicago & Illinois Midland, with headquarters at Chicago, has been promoted to general agent, with headquarters at Dallas, Tex., succeeding **Hall G. Williamson,** deceased.

M. H. Roberts, district passenger agent of the Chicago & Eastern Illinois at Dallas, Tex., has been transferred to Miami, Fla., where he will assume charge of a district passenger agency recently established by the C. & E. I. in that city.

Frederick William Carmichael, export grain assistant of the Canadian National, has been appointed foreign freight agent at Vancouver, B. C. He will have jurisdiction over foreign freight matters for the entire Pacific coast territory.

J. E. Richardson, who has been on leave of absence from the Southern Pacific for the past 15 months to serve as chief of the troop movement branch of the Army Air Forces at Washington, D. C., has returned to the Southern Pacific as district passenger agent, with headquarters at San Francisco, Cal.

W. S. Merrick, southern freight agent of the Pennsylvania at Atlanta, Ga., has been appointed division freight agent, with headquarters at Washington, D. C., succeeding **William M. Hardt, II,** who has been transferred to Cincinnati, Ohio. Mr. Hardt replaces **R. Eugene Walton,** who has been transferred to Cleveland, Ohio.

Everett G. Baker, general passenger agent of the St. Louis-San Francisco, has been promoted to passenger traffic manager, with headquarters as before at St. Louis, Mo., succeeding **John W. Nourse,** who has retired after 54 years of service. **M. Dudley Riggs,** assistant general passenger agent, who has been on leave of absence to serve with the Office of Defense Transportation, has returned to the Frisco as general passenger agent, with headquarters at St. Louis, replacing Mr. Baker.

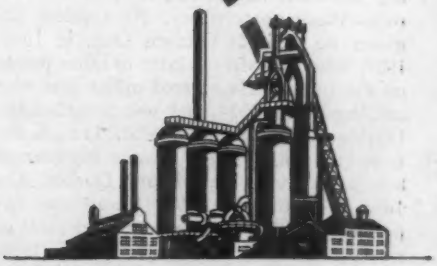
ENGINEERING & SIGNALING

H. H. Hall, assistant general bridge inspector of the Chicago & North Western, with headquarters at Chicago, has been promoted to division engineer on the Western division of the Chicago, St. Paul, Minneapolis & Omaha (part of the North Western System), with headquarters at St. Paul, Minn., succeeding **W. H. Huffman,** who has been appointed acting division engineer of the Eastern division of the C. St. P. M. & O., also at St. Paul. Mr. Huffman replaces **H. W. Jensen,**

News Department continued on next left-hand page

The Travels of a Ton of Ore

Iron ore is loaded into cars built by General American, scientifically designed to do the job fast and at low cost.



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The steel becomes part of the light, sturdy, economical Aerocoach busses built by General American.

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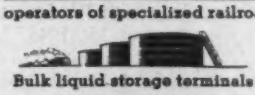
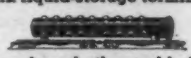


Bulk liquid storage terminals



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Process equipment of all kinds

Precooling service for fruits and vegetables

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who has been granted a leave of absence to enter military service.

William Harry Basil Bevan, whose appointment as engineer of the Canadian National's Northern Ontario district was announced in the *Railway Age* of September 2, was born at Harriston, Ont., October 13, 1883. He entered railroading as a rodman in May, 1902, and the following year was named inspector of the Toronto-Washago territory. As resident engineer he went to Ottawa, Ont., in June, 1907, being transferred later to other points on the system. He entered military service on August 16, 1914, and was awarded the Distinguished Conduct Medal. On his return in April, 1919, he became engineer of bridge survey in Ontario and Quebec. On July 21 of that year Mr. Bevan was appointed division egineer, maintenance of way, at Ottawa, and on January 1, 1920, was promoted to assistant district engineer at Toronto. On October 1, 196, he was appointed division engineer of the Montreal terminals, and on March 1, 1939, was moved to Ottawa as division engineer, returning

William Harry Basil Bevan

to Montreal, Que., on June 26, 1944, as acting district engineer. This post Mr. Bevan held until his present appointment as district engineer at North Bay, Ont.

MECHANICAL

Ernest U. Mazurette, whose promotion to master car builder of the Grand Trunk Western, with headquarters at Battle Creek, Mich., was reported in the *Railway Age* of September 9, was born at Chicago on August 26, 1890, and was graduated from the Milwaukee School of Engineering in 1909. He entered railway service in that year as a clerk of the coach yard of the Chicago & North Western at Milwaukee, subsequently serving in various positions, including chief clerk and chief piece work inspector, with the same headquarters. In 1914 he was promoted to assistant car foreman, and one year later he went with the Grand Trunk Western as chief joint car inspector of that road, the North Western, the Chicago, Milwaukee, St. Paul & Pacific and the Minneapolis, St. Paul & Sault Ste. Marie, at the Milwaukee Car Ferry Docks. In Sep- was made car and locomotive foreman, with headquarters at Battle Creek. On September 1, 1930, he was promoted to general car tember, 1918, Mr. Mazurette was advanced to car foreman and a short time later he foreman at Chicago, the position he held at

Ernest U. Mazurette

the time of his new appointment. Mr. Mazurette served as president of the Car Foremen's Association of Chicago for 1934-1935.

PURCHASES AND STORES

William G. Jones, executive assistant to the receivers of the Seaboard Air Line with headquarters at Norfolk, Va., has been promoted to the position of general purchasing agent with the same headquarters. Mr. Jones was born at Hickory, N. C., on October 31, 1882. He entered railroading in January, 1902, with the Seaboard Air Line in train and yard service, subsequently serving as trainmaster from February, 1915, to March, 1920, when he was named assistant superintendent. He was promoted to division superintendent in March, 1922, and in June, 1927, he became assistant to operations vice-president. He was appointed assistant to the presi-

William G. Jones

dent in February, 1929, and assistant to receivers in December, 1930. In June, 1942, Mr. Jones became executive assistant to the receivers, continuing in this position until his present appointment as general purchasing agent at Norfolk.

SPECIAL

Alexander C. McKibbin, whose retirement as director of public relations of the St. Louis Southwestern, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of September 16, was born at Amaranth, Pa., on February 13, 1876, and received his higher education at the Pennsylvania State College. After leaving college Mr. McKibbin engaged in newspaper, advertising and highway promotional work until May 21, 1923, when he entered railway service with the St. Louis Southwestern to take charge of the then newly-created public relations department, being given the title he held at the time of his retirement.

Paul M. Bunting, whose promotion to director of public relations of the St. Louis Southwestern, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of September 16, was born at St. Louis on July 8, 1905, and entered railway service on April 1, 1920, as a stenographer-clerk of the Pennsylvania at St. Louis. In June, 1925, he was appointed secretary to the transportation assistant of the St. Louis

Paul M. Bunting

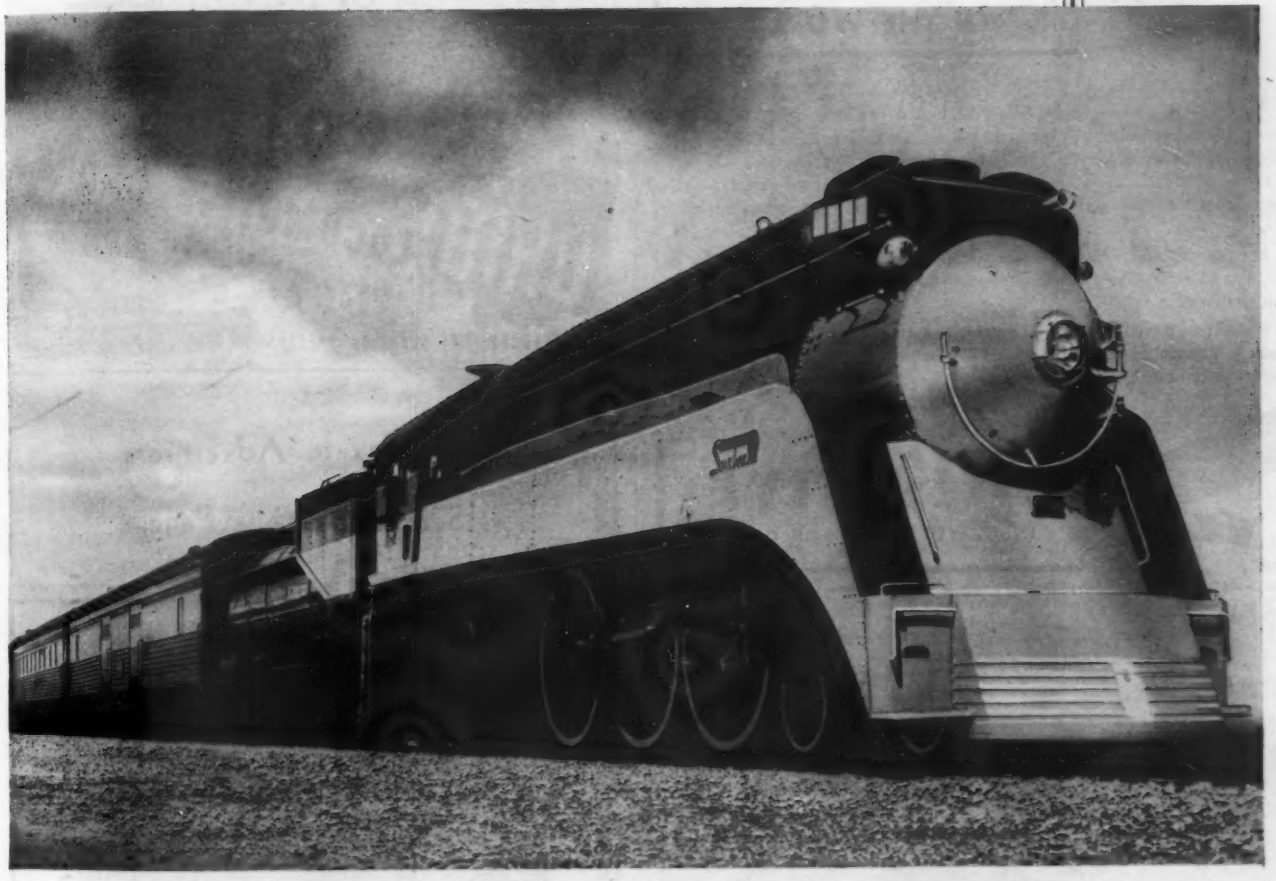
Southwestern, with the same headquarters, and one year later he was appointed statistical clerk of the executive department. On August 17, 1927, Mr. Bunting was advanced to secretary to the president, with headquarters at St. Louis, and in February, 1937, he was promoted to administrative assistant to the traffic manager, with the same headquarters. In September, 1939, he became assistant to the general freight agent at St. Louis, and four years later he was assigned to conducting a class in ticket selling, with headquarters at Tyler, Tex. On August 15, 1943, Mr. Bunting was reappointed assistant to the general freight agent at St. Louis, the position he held at the time of his new appointment.

OBITUARY

Daniel J. Deasy, assistant to the general manager of the Alton, with headquarters at Chicago, died in a hospital in that city on September 16, following a short illness.

William H. Clausen, terminal superintendent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Schiller Park, Ill., died in a hospital at Fond du Lac, Wis., on September 16.

1,350,000 miles AT MILE-A-MINUTE SPEED



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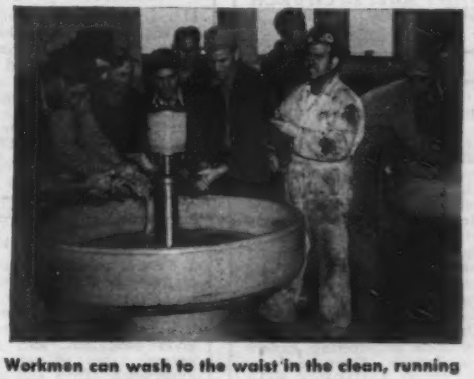

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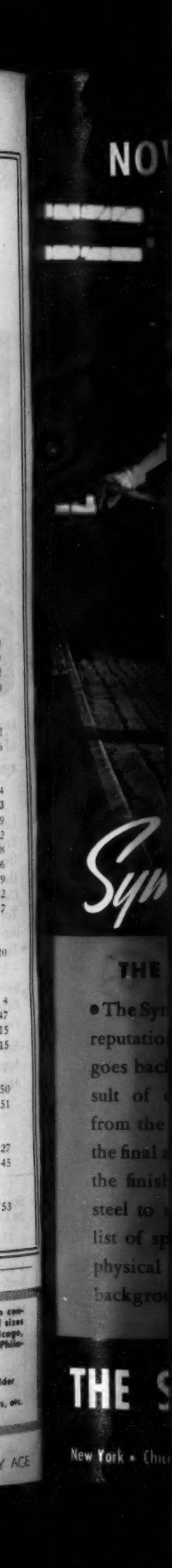
September 23, 1944



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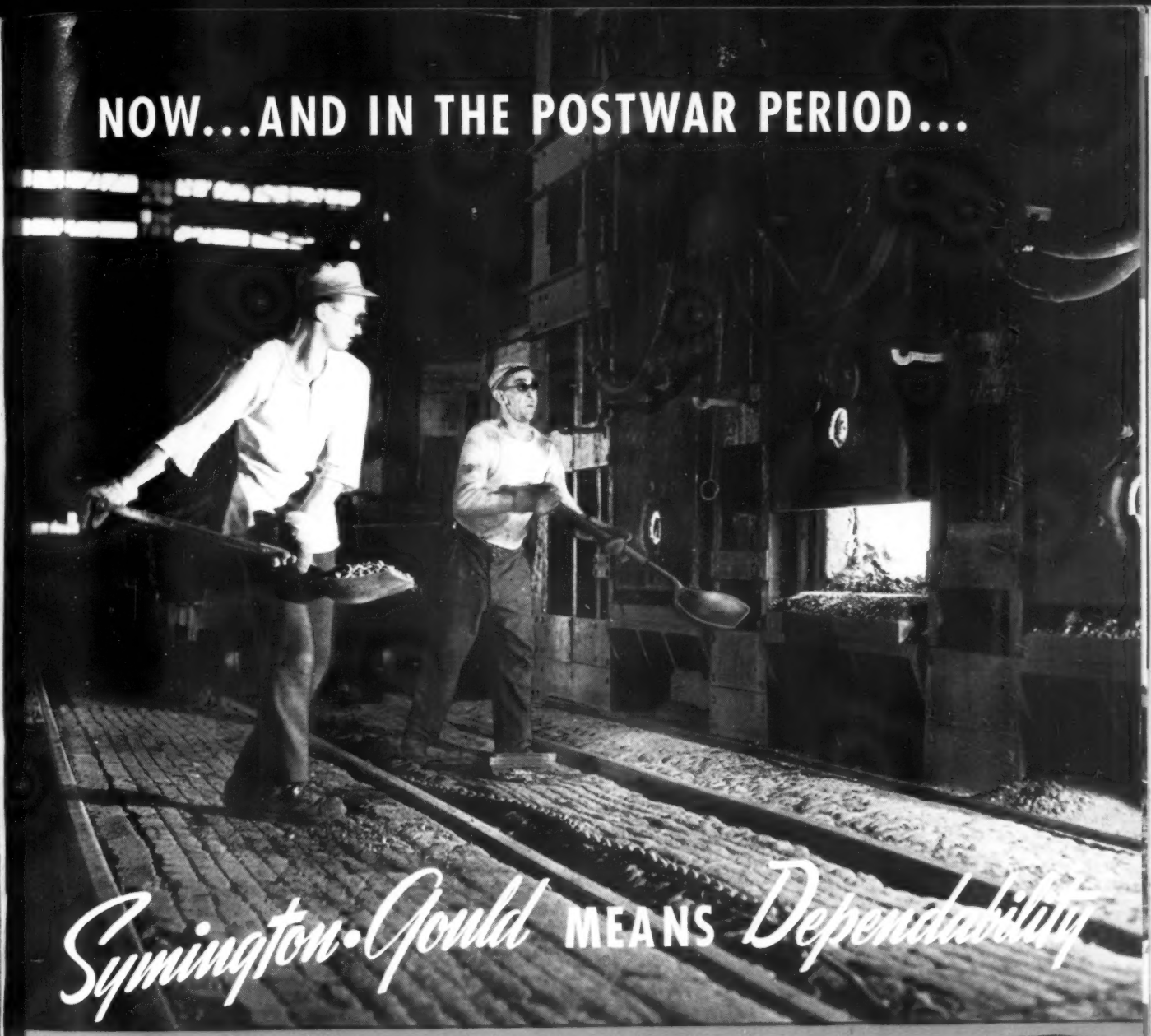

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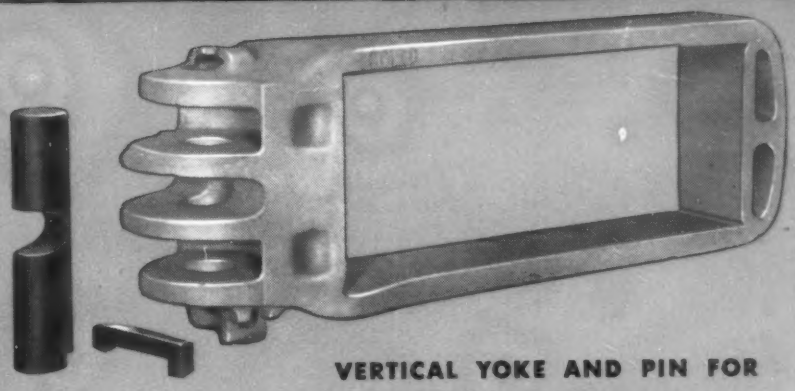

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